

MOTOR TREND

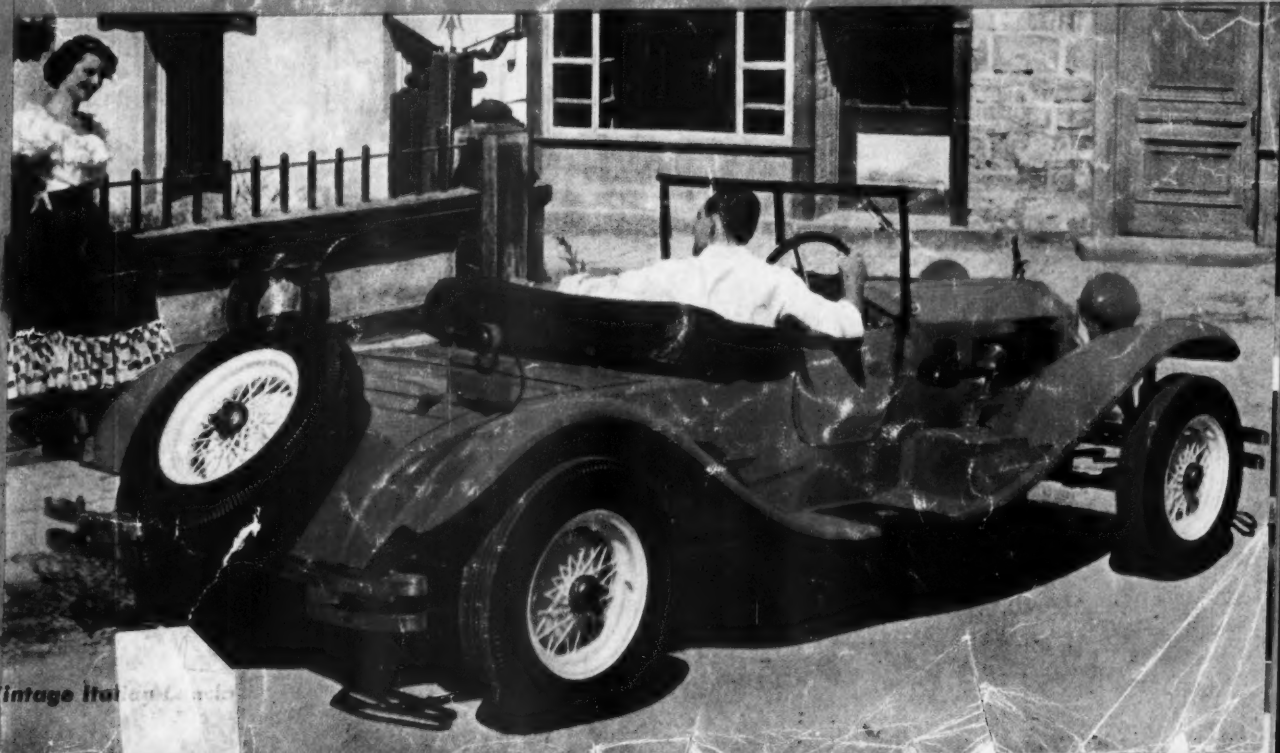
JANUARY 1952 25c

The Magazine for a Motoring World



How to Build Your
Custom Sport Car

6 MORE PAGES! MORE PHOTOS! MORE COLOR!



Vintage Italian car

VR V.4 1952
SOME OUTSTANDING VICTORIES AND ACHIEVEMENTS



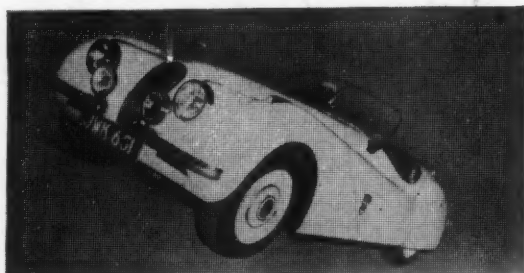
JABBEKE (BELGIUM) 1949 (132.6 m.p.h. — flying mile)



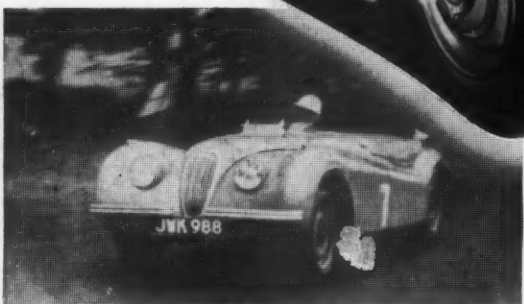
ALPINE TRIAL, 1950 — 1951



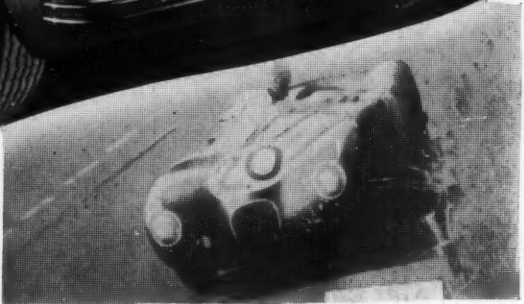
SILVERSTONE 1949—1951



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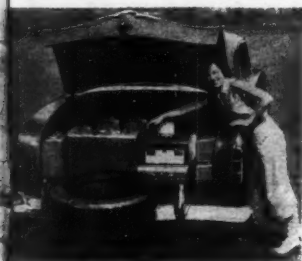
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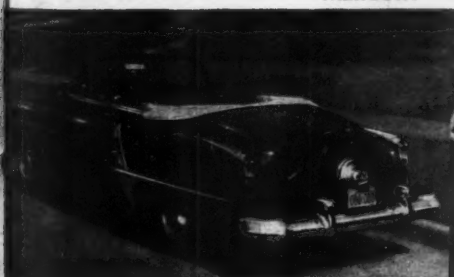
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MOTOR TREND

THE MAGAZINE FOR A MOTORING WORLD
JANUARY 1952 Published Monthly



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Motor Trend

Next Month . . .

AWARD FOR ENGINEERING ACHIEVEMENT

FEBRUARY'S MOTOR TREND will carry one of the most controversial articles ever to appear in an automotive publication *anywhere*. This will be based upon analysis of the Motor Trials of 15 '51 cars. On the basis of absolutely objective performance data and calculations, every car tested will be given a rating. The most outstanding car will win the MOTOR TREND Award for Engineering Achievement. Don't miss this—you'll want to find out how your car (and your friends' cars) rates. Feelings will be hurt here and there, but it's every motorist's right to know these facts.

INSIDE DOPE ON XP-300

CHARLES CHAYNE, GM's vice president in charge of engineering, has taken us riding in Buick's sensational XP-300, granted us an exclusive interview. Artist Rex Burnett has executed a superb cut-away of the XP's engine, based upon exclusively-released engineering drawings. All this adds up to potent coverage of a very important new machine.

CUSTOMS

TWO FABULOUS custom cars are slated for treatment in February; one a lush '41 Ford Coupe de ville, the other a '49 Ford convertible that's clean as a bullet and loaded with new ideas.

MOTORAMA

IF YOU were unable to attend the greatest, most varied auto show in the West, see next month's coverage of the high spots of Motorama: fabulous sports and custom cars, fine foreign machines, the best in hand-built roadsters, plus speed and power accessories that are designed to give more oomph to *your* car.

TAXES AND YOUR CAR

WITH INCOME tax time rolling around nothing could be more appropriate in a popular automotive magazine than accurate information on how your car or cars affect your own tax situation. Two months from now, in the March issue, we will bring you the information you will need to help you file your tax return.

OUR COVER

You can build a sport custom car like Charles Martz' transformed Hudson. All the necessary steps are explained on pages 33 to 36 of this issue. Cover girl Shirley Ann Hillhouse has test-driven the Martz car for over 2000 miles. She says the pickup is terrific—male pickup, particularly.

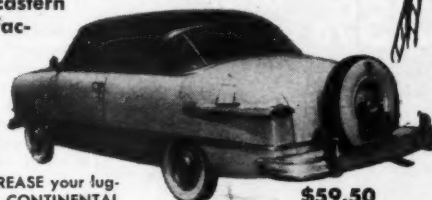
The red, vintage gem that shares the cover this month is Gloria Swanson's old Lancia Lambda. Jim Talmadge sits at the wheel and Harriet Haven lends charm to an old-world setting at the 20th Century-Fox Studios.



Restyle, give the car a new appearance!! Make it a practical, beautiful Xmas from Eastern Auto Supply Co. Satisfaction guaranteed.

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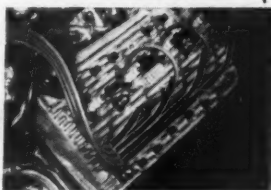
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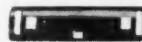


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READER REFLECTIONS

Letters published in this department are the opinions of the writers and are not to be construed as those of the editors. Address correspondence to: Reader Reflections, MOTOR TREND, 1015 South La Cienega Boulevard, Los Angeles 35, California.

BACK-PRESSURE ON STEAM CARS

Gentlemen:

The steam boys are at it again!

Because a steam engine itself is simple as compared to the gas engine, many amateur engineers think a steam car should be much better than a gas car. The gas car won out in open competition. Besides having steam engine problems, the steam car had burner and boiler problems. Fuel pumps, pilot lights or electric igniters, fuel regulators, safety valve, low-water alarm, a device to keep water out of the cylinder . . . (were all necessary).

Let's not fool ourselves that (steam cars) are cheaper or simpler to operate. Ask any owner. No, the steam car lost to a better all-around opponent.

As for the car of the future, in my opinion it is the electric. . . . Now don't tell me that the batteries would have to be bigger than the cars. Isn't it reasonable that when electric cars could travel a distance of up to 50 miles on a charge 50 years ago . . . that with a little engineering and inventive genius applied to the electric car it could equal the gas car in power, speed and cruising distance? To me it is not at all impossible to expect to see in the near future a battery the size of the present storage battery powering an electric car.

Battery recharge or replacement? Carry two. Every parking meter could be a charging station. Remember electric power was scarce when the electric car began. Now it is everywhere.

Dr. R. E. Sayers
Libertyville, Ill.

—And, Dr. Sayers, now we have the "self-charging" Clarite battery, reviewed in last month's MOTOR TREND—Editor

CUT-DOWN CUSTOMS IN THE FROZEN NORTH

Gentlemen:

What do we do with a custom car in our climate?

I would very much appreciate seeing a classy cut-down custom car trying to move on one of our beautiful winter days. It would be hilarious! The driver couldn't see, the cut-down windshield wouldn't have room for frost shields or wipers. His 285-hp motor would race wildly as he spun on the icy street. He might get out of the garage occasionally, if his cut-down rod didn't have him stuck in our snow, and where would his chains go? He wouldn't dare drive far with his nice efficient "rolling mufflers" either. Our police force severely frowns on undue noise.

Custom cars and hot rods are fine for California where you have the climate, facilities, and cooperative police but what do our foreigners do?

Don Anderson
Minneapolis, Minn.

—Cars, like types of architecture, are largely products of their environment. "What do we do?" is a question that each environment must answer for itself with imagination and action.

—Editor

A MECHANIC DISAGREES

Gentlemen:

Why did you have to put that article about "Bandits in Coveralls" in and ruin a very good series of editorials? The way you have depicted a mechanic, you make him look like a Chicago hood with a fiddle case under his arm. The actual truth is that in practically all cases in

larger automobile dealerships the mechanic doesn't ever see the work order but only the hard copy with the required labor and the factory flat-rate labor price on it. He receives no compensation whatsoever from any part that he sells. If the old part is serviceable and no danger of failure, it is to his advantage to leave it as is.

Any customer that would pay such a ridiculous bill as the one you used as an example should be gypped out of all that he has. On the parts side of the bill we find the "flywheel exchange." If a flywheel needed replacing there would be no exchange. The same is true on the cylinder-head exchange. Then on the labor side we find \$7.50 for a tune-up which is within reason, but right after that they have another \$7.50 for clean and repair carburetor which is part of the tune-up. Then there are no parts listed to substantiate the carburetor repair or the starter repair.

One thing that you play up is the customer's side of the story. True, the average customer doesn't know an exhaust valve from a rear axle and will always try to think that if he has spent say \$50 on some old klunk it should drive and run like a '51 Caddy. That is just human nature. I have had cases where the customer had the engine tuned up then griped because it didn't stop using oil or because the transmission jumped out of second gear or the rear end howled. . . .

Pfc. Jimmie Foreman
Camp Beale Air Base, Calif.

—"Bandits in Coveralls" was primarily aimed at exposing certain widely practiced rackets. But the story did assure the reader that there are plenty of honest men in the auto repair trade. DID urge the "what's-a-spark-plug?" type not to expect MORE than he pays a fair price for.

—Editor

CORD SPEEDSTER STORY

Gentlemen:

In the October issue of MOTOR TREND, on page 42, there is a photo of a Cord speedster with the caption "Whodunit." I designed the car and there's a very interesting story back of it.

"Murphys" was a close guess. In 1929-30, I was styling at Murphys where several of my designs were built on Duessenberg's, Cords, etc. The depression was having its effect on the custom-body business and I was advised that sooner or later Murphy would have to close. Seeing the "handwriting on the wall," I packed my things and left beloved California to try my luck in Detroit. I intended to stop at the Cord Corp. in Auburn, Ind., on the way, to see about a job. I took some sketches with me and got an interview with Roy Faulkner, president. Mr. Faulkner was a most unusual executive; youthful, dynamic, vigorously interested in any new and exciting ideas. He was delighted with the speedster design—air foil fenders were new in '31, and he wanted it for the next auto show.

The draft for the speedster was developed at Auburn, and I believe the metal work was done there in the experimental division. I did not see the metal job 'til it was displayed in New York. Mr. Faulkner wanted to surprise me and led me through the salon so that I came upon the speedster suddenly, from behind a pillar. What a thrill!

With the closing of the Cord Corp., I went to General Motors for a few months. Roy Faulkner joined Pierce-Arrow as vice-president. Dissatisfied with GM, I quit my job and designed an eighth-size, clay model of a super-streamlined, flush-body sided, sport sedan on

the Pierce-Arrow 145 in. wheelbase. I took the sketches and model to Roy—result, the "Silver Arrow" in the '33 auto show. Remember?

When the "bank holiday" came, Pierce-Arrow shut down and I came back to Detroit. I lost only one day between jobs. Left Buffalo, Friday, saw John Tjaarda at Briggs, Saturday, and started to work Monday, on the design of the rear-engined job which finally reached the public as the first Lincoln Zephyr.

After several years at Briggs, I left in '39 to help Packard on the development of the first Packard Clipper. I left Packard in '48 and spent a year and a half in California trying to revive the custom-body business. I had little success in that, but I got a consultant account with Willys-Overland. I've been working on this project day and night for 16 months. Hope you will like the result.

P. O. Wright
Clawson, Mich.

—A fascinating story, Mr. Wright. Wish we'd hear from others with backgrounds like yours.
—Editor

MORE ON STOCKERS

Gentlemen:

Enjoy your editions very much, but I feel that you spend much too much time with those so-called sports cars. I myself would rather have you devote some time each issue with the results of the latest stock car events and throw some good action shots in with the write-ups. It must be at least six issues now that you have failed to say a thing about America's fastest growing auto sport. Every issue has spent a page or two on foreign sports cars. Is this American or not? If those that love their foreign cars so much want a whole magazine devoted to them let them go ahead, but since we live in the U.S. let's stay with the American stock car. I know that there would be at least seven more men out here in my community that would subscribe if you would spend less time with the foreign car and stay with the stock car.

R. H. Kuehle
Parmelee, S. D.

—Stock car racing is one of the toughest fields to cover. We'd like to hear from writers and photographers interested in covering important races in their areas.—Editor

TON MPG

Gentlemen:

Will you please tell me how the ton-mile-per-gallon average is obtained? I've tried dividing the miles per gallon into the ton-miles average but it doesn't jibe. I get too much tonnage.

C. Oheney
Oakdale, La.
wt. in tons \times distance
gals. of fuel consumed

—Ton mpg =

—Editor

LIMIT ON DISPLACEMENT

Gentlemen:

With reference to Mr. Ellsworth Jennings letter (November MOTOR TREND) regarding gasoline rationing for engines of over 200 cu. in. displacement, I wish to convey the following facts:

Displacement is not the only factor governing economy or efficiency. As an example, let us consider the popular Oldsmobile 88. This "Detroit Brute" happens to sport a nice fat 303 cu. ins. of displacement. However, its economy and efficiency will equal or exceed many engines of 200 to 250 cu. ins. whose performance cannot begin to compare with the 88.

As a result, I believe your idea of gas rationing by cu. ins. is slightly gassy.

R. B. Gylling
San Diego

—Mr. Jennings' point was that such a restriction on displacement would FORCE the adoption of known design principles resulting in, for example, a 200-in. engine as efficient, economical and powerful as a 300-in. engine.—Editor

(Continued on page fourteen)

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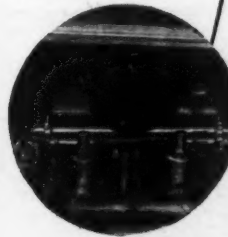
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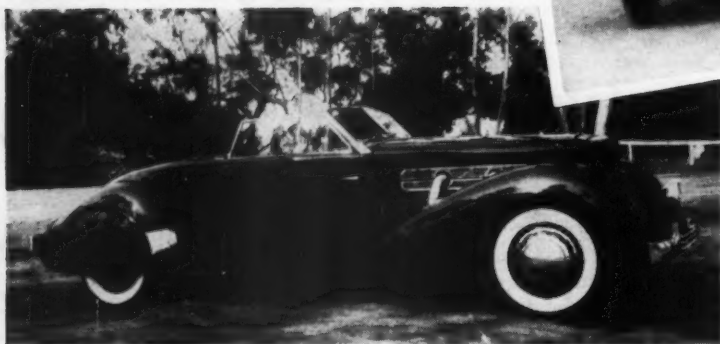
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RANDOM SHOTS...

photos from our readers



"COMING AROUND THE BEND"—or, "Holding Her Down at Forty" is the caption Arthur Twohy suggested for this wonderful action shot from his files. The photo was snapped at Los Angeles Agricultural Park in '07. Windy Smith, local agent for Elmore cars in those distant days, is at the wheel, winning the race from an air-cooled Franklin and a Thomas Flyer.



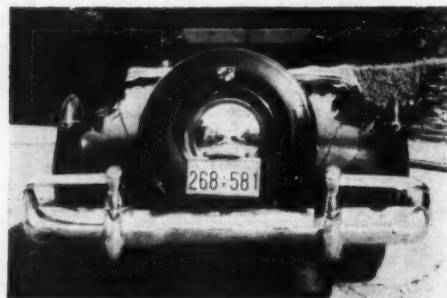
"I PRIDEFULLY drive the car in the enclosed photo," writes industrial designer Carl Lang of Los Angeles. "It's still going strong today, after 114,000 miles. The front-wheel drive, high power-to-weight ratio, low center of gravity, functional design, and supercharged power combine to give unmatched stock car performance. There definitely is no new U. S. car I would even remotely consider trading it for!"



LLOYD HENRY of Glendale, Calif. writes, "In the November issue of MOTOR TREND I saw a picture of a custom by Pvt. John Sheldon. The caption said that a 'complete Mercury grille had been installed in a Ford.' 'I believe the grille shown is from a '50 Meteor (Canadian Ford). Am I not right?' 'Here's my '49 Ford with '51 Meteor grille."



AL SULLIVAN, Roseburg, Ore. says, "Some months ago I read that your readers wanted to see pictures of restyled Plymouths. Here's one. "Dick Croswaite and I took four ins. out of the top, filled the fenders, and put in a '47 Olds grille. Hood is new alligator type. Engine is a bored and stroked '46 Chrysler with dual carbs."



WHAT IS IT? A '50 Stude Commander convertible, of course. The car is owned by Walter P. Downs of Montreal, Canada and fender fins were done by Fisher Body Works in that city. The fins consist simply of coffee tins and hot lead formed over the stock fenders. "Continental spare" is the standard Ford kit very neatly modified to fit the Studebaker

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SPOTLIGHT ON DETROIT - BY HARRY CUSHING, DETROIT EDITOR

as we go to press . . .

DETROIT, MICHIGAN—At last the new cars for '52 are here! Weeks, even months, after original introduction plans fell through due to the national defense emergency, the auto industry pulls back the veil of secrecy which has shrouded its latest creations.

This month's "Spotlight" probes these offerings and finds styling virtually unchanged in some; a number of intriguing mechanical features in others; and a completely new small car destined to capture the public's attention.

Bowing in at this time are Dodge, DeSoto, Packard and Willys. Disappointingly, the long-anticipated V-8s for the first two lines were not released. Latest word is that spring will bloom across the land before you will see these new engines.

Dodge and DeSoto Basically Same

These two popular cars in the Chrysler corporation lineup for '52 are still "safe and sane" vehicles. Styling and engineer-



'52 DODGE GRILLE is handsome, simple; wheel covers are new. Chrome parts at rear have been re-designed, tinted safety glass is optional. Engine is still the same; some features kept

ing alterations have been held to a minimum; changes announced for the new models are designed to improve comfort and increase safety.

From an appearance standpoint, Dodge has made some modifications in the grille, installed new wheel covers and hub caps, redesigned the tail light and rear fender trim. An optional feature which will appeal to many drivers is a new greenish-tinted safety glass to be installed for windshield and windows.

No under-the-hood changes are noticeable at this time, but waterproof ignition systems, electric windshield wipers and oriflow shock absorbers are popular mechanical features being retained.

Eight models make up the Dodge line for '52 in the Coronet, Meadowbrook and Wayfarer series. Two models have been dropped, the Sportabout and an eight-passenger sedan.

DeSoto is heralding comfort, economy and safety as its outstanding features for next year. Large brakes, Oriflow shocks, and safety-wheel rims stand out in this line. Here, too, tinted glass is available to cut down road glare. On some models it will be standard equipment. Stylewise, the '52 DeSotos will make available a large variety of two-tone body colors. New nylon and woolen fabrics are being used throughout the interiors. DeSoto's Custom and De Luxe lines offer motorists a choice of nine different body styles.

Packard Pioneers New Brakes

Although bristling with more than 70 mechanical changes and improvements for 1952, Packard's most sensational feature is the introduction of power braking. The new system, which eliminates the usual

brake pedal and substitutes a control similar to the accelerator treadle, is a development of Bendix Products division of the Bendix Aviation Corp.

Offered as optional equipment, it reduces pedal pressure about 40 per cent, and cuts the time required to move the foot from the accelerator to the brake treadle by 29 per cent. Industry sources predict that at least three GM cars also will have the new system. The Packard device, called "Easomatic," receives power through a simple vacuum cylinder mounted under the toeboard and directly connected with the brake treadle. It eliminates the need for the conventional master cylinder in the hydraulic system. A treadle-mounted pedal extends only 4 $\frac{3}{8}$ ins. from the car floor as compared with 7 $\frac{1}{4}$ ins. previously. Now, all a driver has to do is pivot his foot from accelerator to brakes instead of "lifting" it as in the past.

Among other mechanical improvements, eight major refinements have been made in Packard's automatic transmission to achieve less drag and faster kick-down operation. Styling highlights include new grille and bumper treatment, heavy concentration on two-tone paint combinations and revitalized interiors.

The 1952 Packard line is composed of the 135-bhp "200" and "200 De Luxe" series on a 122-in. wheelbase; the Mayfair and convertible models, each with 150 bhp; the "300" series with 127-in. wheelbase and 150 bhp; and the luxurious "400" series, developing 155 bhp at 7.8:1 compression ratio.

Looking Into '52

New car introductions for the remainder of the industry will extend over the
(Continued on page fifty-six)



'52 DE SOTOS will carry modifications to brightwork. Safety will be big selling point, supported by better wheel rims, big brakes, Oriflow shocks



MOST LUXURIOUS series of the '52 Packard line will be the "400," equipped with a 155 bhp, 7.8:1 comp. engine. Grille, bumper have been revamped, emphasis will be on two-tone finishes



Alan Ladd

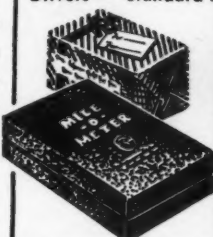
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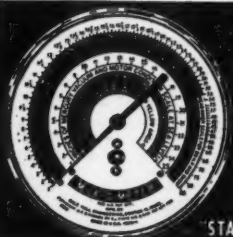
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Your Editor Says . . . WE OWE IT ALL TO YOU

THOSE OF YOU who are steady readers of *MOTOR TREND* cannot have failed to notice the steady improvement of the magazine since its inception in September 1949. The many changes incorporated in *MOTOR TREND* have been mainly due to you, our readers.

As you may recall, we started with 32 pages and a black-and-white cover. Through the months that followed, we added or deleted articles, juggling the type of coverage to meet your requests. As our distribution grew from a somewhat mediocre 40,000 up to the present 400,000 we added new features, expanded our coverage of some subjects, reduced that of others—in other words, did our best to give you a representative insight into important happenings throughout the entire automotive world.

As our circulation grew, more pages were added. In April 1951, you made possible a full-color cover bound around a 48-page magazine. Last month there was another page addition—this time 16—at the same time modifying the format to

deal with events that would interest old and new readers alike.

To continue to improve the magazine, we depend on your constructive criticism. Those of you who have a bent for writing or a flare for photography can help us equally as well. In the past there have been times when it became necessary to search far and wide for a writer or photographer to cover a particular subject. As "*The Magazine for a Motoring World*" we must have correspondents in all corners of the globe.

It is very possible that there are many of you now reading this who may have thought, "I'd like to write an article for *MOTOR TREND*. I know I could do a better job than that writer!" Although you may have nurtured the idea for a while, it probably withered and died before you ever sat down at the typewriter. Yet, it's possible if you had had a little more confidence in yourself, your article might have been accepted for publication.

We at *MOTOR TREND* are never too busy to read or look at contributions, for

it's through new and original ideas that a magazine can continue to grow and improve.

So, the next time you get an idea for an article or pictorial spread, don't back down on the assumption that your effort might not be good enough, or that it might not be appreciated. To your surprise it may be published. Not only will you have the satisfaction of seeing your work printed, but you'll receive a check for any photographs or copy published.

Now, will you do something for us? We'll be glad to read anything you submit but there just isn't enough time to decipher hand-written items. So please use a typewriter and write double-spaced copy on one side of the page only. Photographs should be at least 4 x 5, clean with sharp contrast, printed on glossy paper. Enclose a self-addressed envelope and sufficient postage if you wish your material returned if it is found unsuitable for publication. Address: Manuscript Department, *MOTOR TREND*, 1015 S. La Cienega Blvd., Los Angeles 35, California. —W.W.

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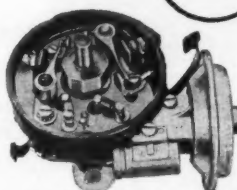
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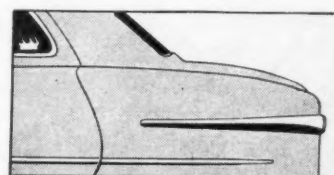


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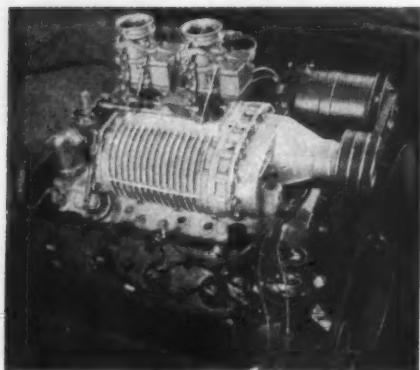
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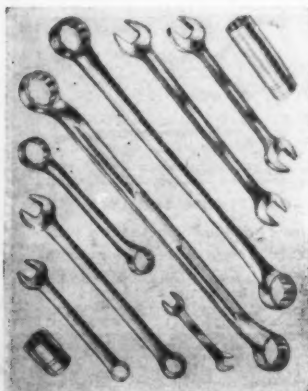
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Reader Reflections

(Continued from page seven)

JAGUAR AND ROADABILITY

Gentlemen:

Your Motor Trial articles in MOTOR TREND are very interesting and informative. More emphasis is needed to acquaint the public with the poor to terrible "roadability" of our American-made cars. Then perhaps Detroit will wake up to the fact that those of us who need stability and roadability in a car should have it.

At the moment I'm very interested in the Jaguar Mark VII Sedan, feeling that it would give me the safety I need at speed on both straight improved highways and winding secondary roads. I'm wondering if there is any possibility of you including one of these Jaguar sedans in your Motor Trial? I drove one three weeks ago, was favorably impressed but would feel better if able to check my impression with those of someone more qualified to analyze their good and unfavorable features.

G. A. Siebke
Vincetown, N. J.

—See the January issue of our new companion magazine, AUTO. Dick van Osten will have the answers there to what's good and un-good about the Mark VII.—Editor

MORE DISAGREEMENT WITH MR. JENNINGS
Gentlemen:

In your November '51 issue Mr. Ellsworth Jennings voices some complaints about the lack of mechanical advances in American automobiles. I agree that there might well have been more improvement, but is the small engine with high horsepower per cubic inch an advancement? Look at the enormous engines used in Rolls-Royce and the pre-'32 Mercedes. They were two of the most long wearing and trouble-free engines ever made. Also the '51 Lincoln, with the largest engine in production for American stock cars, won the Mobilgas Economy Run. An identical Lincoln moved from a standstill to 60 mph in less than 16 secs. according to Motor Trend's Motor Trial. Durability, economy, performance, what more do you want? Racing and sports cars, designed to fit a formula, of course have to squeeze every possible horse out of a given displacement. I feel that these cars would start a new era in dependable, long life design if their limitations were in gallons of fuel rather than cu. ins.

For a small engine with its unavoidably low torque to put out high bhp, it must run fast. This means considerable valve overlap is needed, which cuts low speed pull to the vanishing point and makes for rough idling. In modern traffic we have to do a lot of very low speed running and frequently stop for several minutes at a time. Obviously our cars must idle well, and if we have to run in low or intermediate gears a large part of the time, what happens to gas mileage?

Mr. Jennings complains about the very slight increase in power during the last 20 years. Isn't it because we have enough power now? I would certainly take out more life insurance if the average driver had a bhp-to-lbs.-gross-weight ratio of 1:10!

As to size, I personally need a car that will hold three adults, a portable crib complete with baby, a large dog, four suitcases, a large carton of odds and ends, a folding table, and a stroller for the baby; and, oh yes, me. I have two cars, a '49 Buick conv. and a '48 Lincoln four-door, both of which were selected because they ride well enough not to keep the baby awake, and have room for the aforementioned junk.

Several long-overdue developments seem to be on the way: Power steering, power brakes, torsion bar suspension, integral body and frame.

N. Armstrong
Wallingford, Pa.

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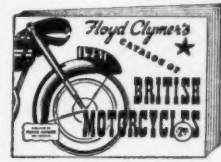
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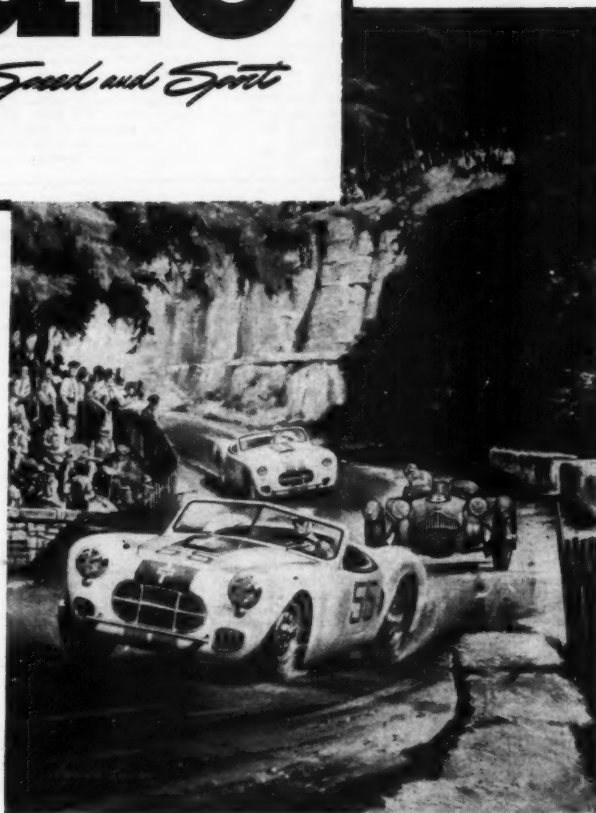
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WHEN YOU'RE RIGHT...

FIGHT

NOTE: The editors wish to thank Robert J. Gottlieb, prominent Los Angeles attorney and member of the State Bar of California for his invaluable assistance in explaining and clarifying many of the intricate points of law that arose during the writing of this article. Mr. Gottlieb's extensive and successful practice in the automotive field as attorney for both customers and dealers prompted MOTOR TREND to seek his services as legal advisor.

The reader must bear in mind that the general statements of law in this article do not necessarily apply to his specific locality or his specific case. If the reader has a problem, Mr. Gottlieb strongly urges that he consult his local attorney.—Editor

UP TO THIS POINT, everything has gone smoothly. You've tested the car you're buying and you're satisfied with its condition. You've checked the price against newspaper advertise-

Contracts, court fights are not the exclusive property of lawyers. It's surprisingly easy to protect yourself

By Eugene Jaderquist

PHOTOS BY FELIX ZELENIKA



This article is a condensation of Chapter III of How to Buy a Car, which has just arrived at your favorite newsstand.

ments and other dealers' quotations. You've made your peace with bank account and budget.

In fact, you're probably rather tired of the whole subject. The constant tramping from one lot to another and the slow, painstaking inspection of each possible purchase is more work than fun. Now that the search is ended, all you want to do is sign the papers and go home.

Some dealers make handsome profits out of this sentiment. Their attitude during the closing of the deal is one of boredom, a we-both-know-this-is-foolish-but-we've-got-to-do-it air that relaxes the customer and makes him less watchful. So you sign the documents he throws at you without bothering to read them.

If anything goes wrong after you've signed the papers, you have little recourse. The law assumes that if you are over 21 and know how to read, you understand the meaning of every legal document you sign and agree to the statements contained therein. No judge is impressed if you tell him "I didn't understand what this clause meant" or "the man said there wasn't any use in taking the time to read this."

Legal language is not easy to understand, of course, but that still is no excuse. You can't be expected to have a lawyer's knowledge of the meaning of the fine print, but with a little help you should be able to recognize dangerous or unusual phrases.

CONDITIONAL SALES CONTRACT

The conditional sales contract is the long and rather complex document you probably will sign if you buy your car on the installment plan. Until you've made the last payment, the automobile does not belong to you but to the seller—regardless of how little money you still owe. You can't afford to neglect any part of this contract.

Even the routine information is important. What you think is a '47 Buick may turn out to be a '42, if the year model is not specifically stated on paper. Don't let the dealer write "as registered" in the space provided. The car you are buying should be described accurately and completely.

No figures on this piece of paper concerns you more than the prices listed for insurance and carrying charges. In recent years these two items have made tidy profits for the few unscrupulous dealers who actually lose money on each sale and still make a whopping profit from the contract.

There are two angles to the insurance charges. One is covered by a fine print clause in the bottom half of many conditional sales contracts. A clause in a typical contract states:

"Purchaser . . . shall keep the property insured in a company or companies approved by the Seller against fire, theft and such other risks and in such amounts as Seller requires."

Thus, if Seller (the dealer) wants you to carry ultra-expensive, non-deductible collision coverage, you must carry it. If he insists that you insure a \$200 transportation car for everything in the book, you do just that. He gets a commission on every dollar's worth of insurance he sells. It's up to you to insist on the proper amount of coverage at the proper rate.

The other insurance dodge (and one that has just recently been made illegal in some states) is to collect the rebate on the car you trade in. Whenever you cancel a policy on your car before the expiration date, you are entitled to receive a cash refund. All you need do is call your insurance company and ask them to tell you the amount of the refund. Then go down and collect it yourself.

The carrying charge (or "time price differential") has long been a source of profit for dealers. No one objects to a reason-

able amount. After all, you're really borrowing a valuable article for which the dealer has paid cash. You owe him a fee for that loan. But you don't owe him any more than a bank would charge for lending you money.

The few dealers who try to make a killing on these charges hesitate to list the amount in your presence, reasoning that the size of the sum might well chill the deal. You will be told that it takes a lot of time to figure the amount, or that only the manager can do that work, or that the bookkeeper who takes care of the calculations is out to lunch or not at work. You're being stalled and it's a good bet that the carrying charge will be a stunning one. Don't touch that pen until the amount has been computed and entered.

If you owe money on your old car when you trade it in, you have a rebate due you on the carrying charge. This is another bit of cash that some unscrupulous dealers delight in taking from you. They simply don't tell you about the rebate and compute the net allowance you get for your old car by subtracting the entire contract balance from the trade-in price. Then they pay off the finance company that held your old contract and pocket the rebate. As in the insurance rebate, you can protect yourself by calling the finance company or bank and asking them what the amount of the payoff is. Armed with this information, you can make sure that the dealer gives you full credit on your old car.

Once the calculations are finished, the dealer pushes the contract toward you. If you've followed his figures so far and



IF HE WON'T TAKE IT, TOSS IT! A summons may be served by any adult. When the recipient is shy about extending his hand, it is usually sufficient to drop the paper on the floor and call his attention to it

know they're fair, you are inclined to just go ahead and sign. This is not always a good idea—in fact, the small print clauses that you haven't yet read can hold more than a few nasty surprises. And there is something you can do about them.

In one typical contract, it is stated in clause two that any accessory you buy and put on the car becomes the property of the dealer until you have made the final payment on the contract. Thus, if you buy a \$100 radio, install it, lose the car because you can't make the payments, the dealer gets the radio. If you remove it, he can sue you.

Clause three of the same contract relieves the dealer of all responsibility for the claims he has made—with limitations. It states that you release the dealer from all verbal promises and statements, that you have examined the car yourself and have relied solely on your investigation in your choice. I say "with limitations" because, in some states, if you can prove that the dealer convinced you that the engine was brand new when it actually was a wreck, the courts will give you relief. Any major misrepresentation on the part of the dealer may give you enough of a grievance for a legal fight, but you have little come-back on minor lies.

Another clause forbids misuse of the automobile or any material change. That last phrase seems to forbid de-chroming or reshaping the body.

If you break any of the rules set up by these clauses—or if you fail to meet the payment due on the date it is due—any of several unpleasant remedies are available to the dealer. He may:

1. Declare that the entire balance of the contract is immediately due.
2. Collect the money due him.
3. Repossess the car. In the act of repossession he may damage your garage door. In that event you have no right to make him pay for the damage. Suppose you locked your camera and your wife's coat in the back seat of the car. The dealer may repossess without any liability for these properties.
4. Sell the car. In fact, in some states, the dealer may have the right to name the time, place and method of sale; he may bid on the car; he may sell with or without notice to you. Thus he can buy the car back himself at a minimum figure, sell it at a maximum, keep the difference for himself.
5. Go to any lengths to repossess the car and charge you for all the costs of repossession. You will pay attorney's fees, expenses for locating the car—everything that can be hung on you, if the dealer is one of the few who is out to take you.

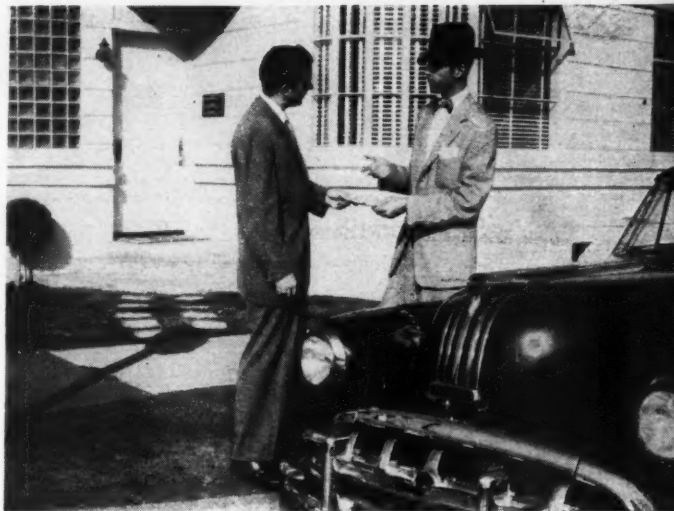
Now as you well know, most dealers are perfectly fair about their contracts. They won't be so technical as to penalize you for late payments, providing they are not too late, or try to overcharge you. They're willing to give you every break, because they figure that you're a good customer who may come back again. This article, and the chapter in *How to Buy a Car* was not written about such people. It was written to help expose those few dealers and finance companies who delight in proving that the buyer must fight for his rights first and trust his fellow man later.

OTHER LEGAL DOCUMENTS

The conditional sales contract is only one of several papers you will be asked to sign when you buy your car. Usually there will be a purchase order, power of attorney, bill of sale, and perhaps others, depending on where you live.

Follow the same procedure on these that you did on the conditional sales contract. Read, compute, understand—then you can't be trapped into signing an extra profit over to the dealer.

One thing to watch out for on both the purchase order and the conditional sales contract is the extra charge. This is disguised under a number of different, official-sounding headings. "Handling charges" is one favorite, "caravan fee" another. The point of both is the same—to pass on to you part of the dealer's operating expense. The handling charge, for example, is amply covered by the profit on the resale of the car and the carrying



ARE YOU BUYING A CAR OR A RECEIPT? Street-corner deals with private parties may easily end in disaster for you. Know the man, know that he is really the owner of the car—then bring out your money

charge in the contract. The caravan fee should be absorbed in the dealer's price to you. The only items you need pay are:

1. Selling price of car
2. Carrying charge (if you pay for the car in installments)
3. Accessories (if any)
4. License fee (if a new car)
5. Registration fee (if a new car)
6. Sales tax.
7. Federal tax
8. Insurance (if you buy from the dealer)

Frequently you will find a phrase like "used cars are sold strictly as is and are not guaranteed as to condition, mileage or year model" in one of the papers you sign. If you have been led to believe that you will receive a guarantee, it is essential that you strike this phrase from the contract. To do this, you simply cross out the objectionable part and get the dealer to initial it. Now you are no longer bound by that particular statement. This is your best remedy in case you find any unfair or dangerous statement.

(Continued on page fifty-eight)

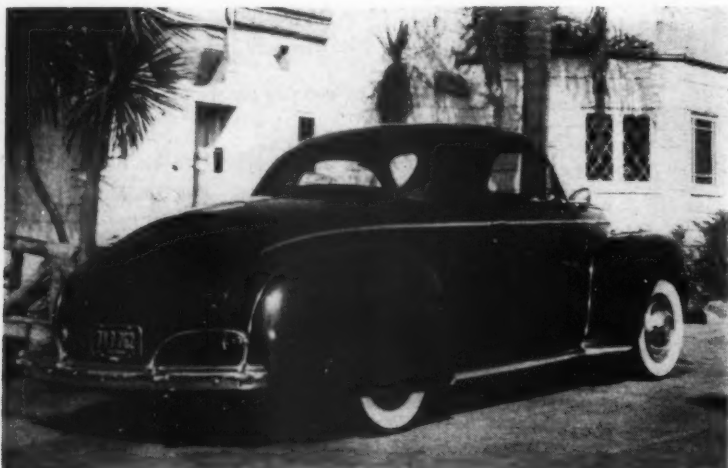
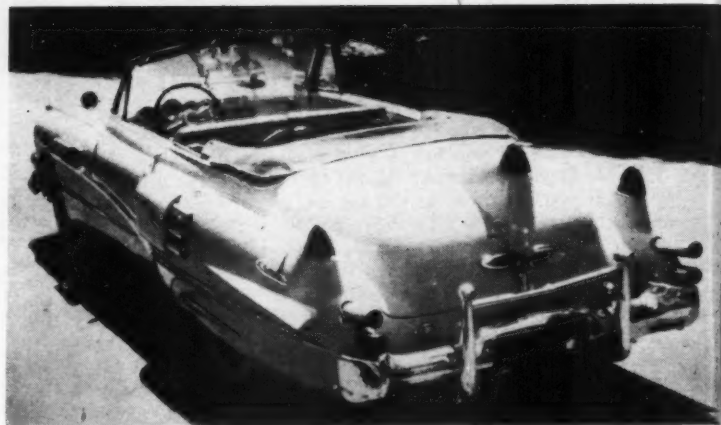


DON'T TOUCH THAT PEN! . . . until you've read every word in contract. For a few unscrupulous dealers, contracts make more money than cars

Restylers and customizers don't worry much about what's been done before. They make their own rules; they change them often. A famous expert on customs defines the current status of the art

BY WALT WORON

CHANGING CUSTOMS



FINE SPECIMEN of the simplicity-loving dechromed-custom school is the Alimentario '41 Dodge. Rear deck has been cleaned of gadgetry and running boards have been removed

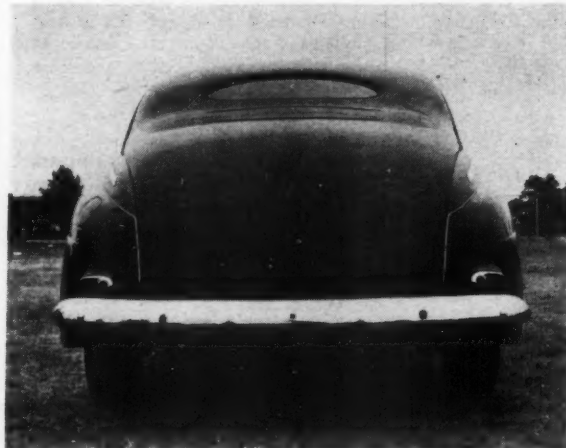
A GOOK WAGON? No, man, that's a lead barge!" Up to a short time ago that's how simple it was to identify restyled stock cars. Now, with enthusiasm snowballing for all classes of automobiles, ideas of restyling are evolving at a furious rate and the time is ripe to take a closer look at the custom car.

"Gook wagon," a perfectly legitimate expression in the jargon of many car enthusiasts, means a car bedecked with mud flaps, extra aerials, portholes and a flying swan with amber wings. "Lead barge," another term used by these same enthusiasts, refers to a car that has been chopped, channeled, body-sectioned, remolded or reshaped (see Glossary). In the days when all body curves were applied with a lead paddle, this last phrase was accurate, but such methods are scorned by present-day artisans. "Dechromed custom" fits modern techniques better.

In the past, these terms have described two distinct categories into which custom cars have been placed. Now, however, it is apparent that the uninhibited young car-builders have been straying from the forms of the past and thus each category must



THIS '41 FORD, rebuilt by Jack Conner, Irv Poole of Seattle, is actually a transition piece since top has been chopped in addition to dechroming
Twenty



BOTH FRONT and rear bumpers of the Conner Ford harmonize nicely with body lines, Chevrolet tail lights match the shape of the bumper

Motor Trend

THIS SPLENDID example of a gook wagon (left) does not fall into the "purist" category due to actual metal work having been done on rear end

be split up into sub-categories. For example, "gook wagons" are not always stock cars under their chrome because a few owners have chopped and channeled before they began to attach accessories to the exterior. Only the charter members of the "gook" school, the real chrome-plated "purists," have refused to deviate from stock.

What will affect you, the owner of a stock car, most is the splitting up of the "dechromed custom" school into five overlapping groups: (1) the conservative, make-it-simple, take-off-the-chrome, (2) the chop-and-channel, get-it-as-low-as-you-can, add-fadeaways-and-a-new-grille, (3) the unique conservative, influenced by Eu-



GRIFFITH-AYALA '42 coupe is perfect illustration of "chop and channel" branch of dechromed—custom fraternity. Typical changes are new grille, fender fadeaways, push-button doors



COACHCRAFT CUSTOM would look perfectly at home in the Paris Auto Salon, is one fine coachbuilder's approach to conferring distinctive beauty upon the American production-line car

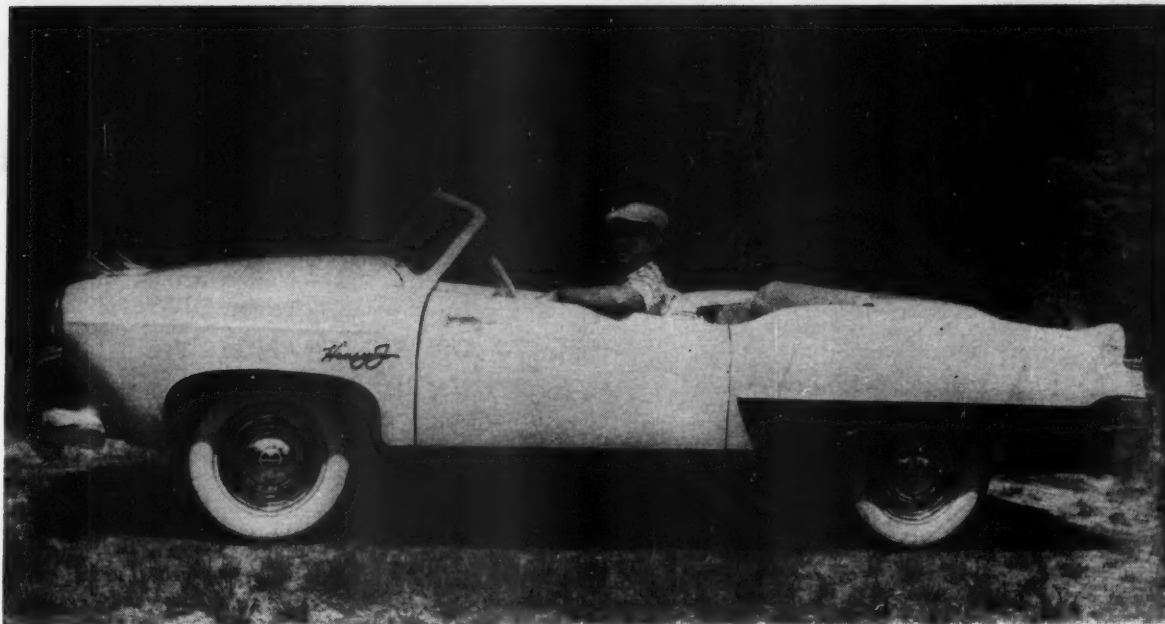
ropean design, (4) the Lincoln-Continental-inspired, and (5) the sport custom.

The conservative group is probably by far the largest of the "dechromed custom" school because of the fact that this type is the cheapest and easiest to make. Two fine examples are the Alimento '41 Dodge coupe and the Poole '41 Ford coupe (both illustrated). These designs show remarkable restraint, although the Ford indicates that its owner is in the midst of a transition that so often occurs with members of this group; they progress (or regress, depending on the point of view) into one of the other groups of the school. If you start out in the conservative group, there is hardly ever any turning back. After you've bull-nosed and decked your car, you'll have to decide once and for

URITTA-BARRIS '41 Ford is just about the ultimate in dechroming, chopping, channeling

January 1952





HENRY J sport custom was built by Whiteville, N. C. K-F dealer Clyde Spradley and illustrates an approach completely opposed to that used in building the Thompson car. Bodywork on that car was entirely original, while in this case only slight modifications were made to stock panels. Success is possible with either approach

European flavor. On the other hand, merely because a car has foreign lines, it does not necessarily follow that it should be included in this category. Wonderful examples of this group are the Peter Stengel-designed, Coachcraft-built '41 Mercury coupe de ville, the Coachcraft '49 Cadillac coupe (pictured) and the Max King '39 Mercury roadster (pictured).

All of these cars have one very important thing in common: graceful sweeping lines with no harsh, jarring notes anywhere in the design. In some respects the custom Mercury might be considered a member of the Barris-Ayala school. However, the reason it fits more probably into the European type school is the fact that it has had nothing drastic done to it. The basically good lines of the '39 Mercury were improved by the filling in of the grille and the long sweep of the rear deck. Why the Coachcraft custom qualifies is not difficult to see. Outside of the fact that it has a Cadillac grille this could very well be a body design by any one of a number of Italian coach makers, who had, in turn, been influenced by English knife-edge style.

Although the Continental-type group has its roots firmly planted on the continent of Europe, the usage of the word continental by the custom enthusiast refers

to the Lincoln Continental. This car naturally had as its original basis European styling; however, most cars which now follow the Continental-type design have been inspired by the car and not by its European ancestors. This is true of both designs pictured here: the Furlong-Doray '49 Ford and the Dick Morris '49 Crosley Hotshot. The similarity between the Ford and the Lincoln Continental is apparent and requires no further comment, whereas

the Crosley Hotshot shows how such a design can be applied to a minimum wheel-base car.

The sport custom type of car is a new one to the custom scene and undoubtedly has as its inspiration the influx of European sports cars into this country. These creations should not be confused with sports cars since they only qualify for the term "sport custom" because they
(Continued on page fifty-seven)



CROSLY HOTSHOT of Dick Morris, Reedsport, Ore. shows how successfully "Continental" restyling can be adapted to a very small car

CARS IN THE FAR EAST

AN ON-THE-SPOT CORRESPONDENT
REPORTS ON BIG CHANGES IN THE
AUTOMOTIVE LIFE OF MODERN JAPAN

By Isamu Uchiyama



TOYOPET PASSENGER car is a midget, but is larger than Datsun, has 27 bhp L-head engine

DATSUN STATION wagon is popular utility vehicle. This type accounts for bulk of Japanese output



IN THE FEW YEARS that have passed since the end of the recent war, Japanese industry has recuperated remarkably. A glowing example of this recovery is the revival of the islands' motor industry.

The present matching of full-scale pre-war output, however, is nothing to rattle the export-minded overseas manufacturer: only 1594 Japanese cars were built last year. But something unusual has just happened on the Japanese automotive scene—something that may bring the Land of the Rising Sun right into the violently-competitive international market. But before tackling the news, let's examine the historical background.

Pioneer car builder of this little archipelago is the Nissan Motor Company of Yokohama, which began producing low-priced Datsun midget cars in '33, cars based upon earlier models previously made under other names by Nissan's af-

filiated manufacturers. Due to the slim financial resources of Japanese industry today, "modern" Datsuns differ little from their ancestors of the thirties.

The Toyota Motor Company, located in a rustic setting in Aichi Prefecture, was set up in '33 as an offshoot of a famous loom works. It has continued to grow and produce trucks and passenger cars through the intervening years, and now makes the Toyopet. Both Nissan and Toyota, although their total output is low, have always maintained some export trade with Korea, the Southern Islands, and the Asiatic mainland.

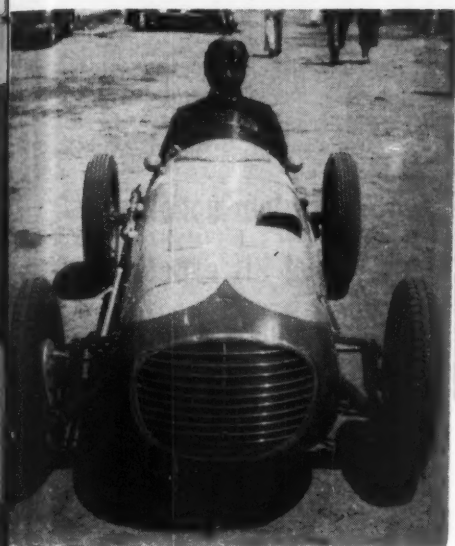
One of the things lacking in the Japanese automotive scene and something which every other car-producing country possesses, is sporting competition. Improvement of the breed and enthusiasm for motoring in general have suffered in consequence.

But now the picture is changing. With-

in the last 12 months two sports car clubs have sprung into existence—SCC of Japan and MG Car Club—and racing is becoming established as a popular sport.

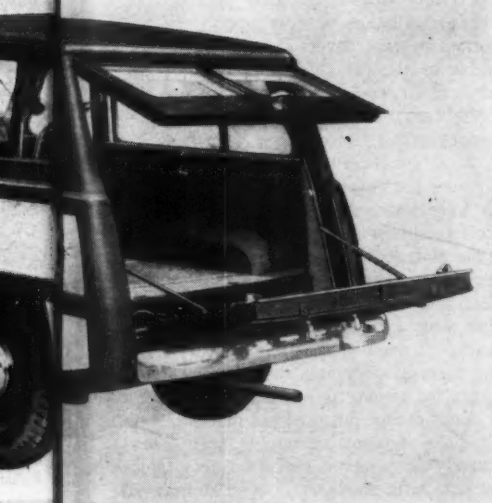
So far, the new racing movement has resulted in the appearance of two Japanese-built competition cars: identical, 750 cc Datsuns. Both were entered in the first American-Japanese sports car race last year where one beat a Crosley Hot-shot to the immense delight of the native spectators. The Crosley had reigned as a heavy favorite before the race but the Dat Queen, as the home entry was called, negotiated the 2½ miles in 3:41.3, 13.7 secs. ahead of the American car. Bringing up the rear, almost neck-and-neck with the Crosley, was a pre-war Datsun.

The Dat Queen, and its mate the Dat King, were the result of collaboration between the manufacturer and a new firm,



ENGINEER OHTA, designer of the new Japanese competition cars, sits at wheel of Dat Queen (above), in which he was successful in first American-Japanese sports car race. Engineer Kobayakawa from Nissan factory also drove

BUSINESSLIKE-LOOKING Dat Queen (above, left) has tread wider than half its wheelbase. This, low gravity center gave handling qualities that made up for any lack in engine or brakes



Wide Field Motors. Wide Field is headed by sports car enthusiast Yuichi Ohta, a young executive with a keen interest in both sports and racing machines and a member of the newly-formed SCC of Japan. He is the designer of the Datsun competition machines and was also the driver who beat the Crosley.

The competition Datsuns show little resemblance to the production car on which they were partially based; rather, they look like little 4CLT Maseratis. The 45.58 cu. in. engine uses an F-head valve arrangement, twin side-draft Solex carburetors, and operates at 7.6:1 compression ratio. Two of the three main bearings are ball bearings. Bore and stroke of the four cyls. are 1.52 x 1.65 ins., and horse-

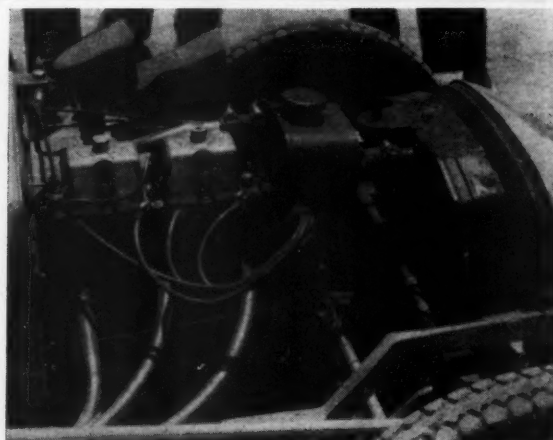
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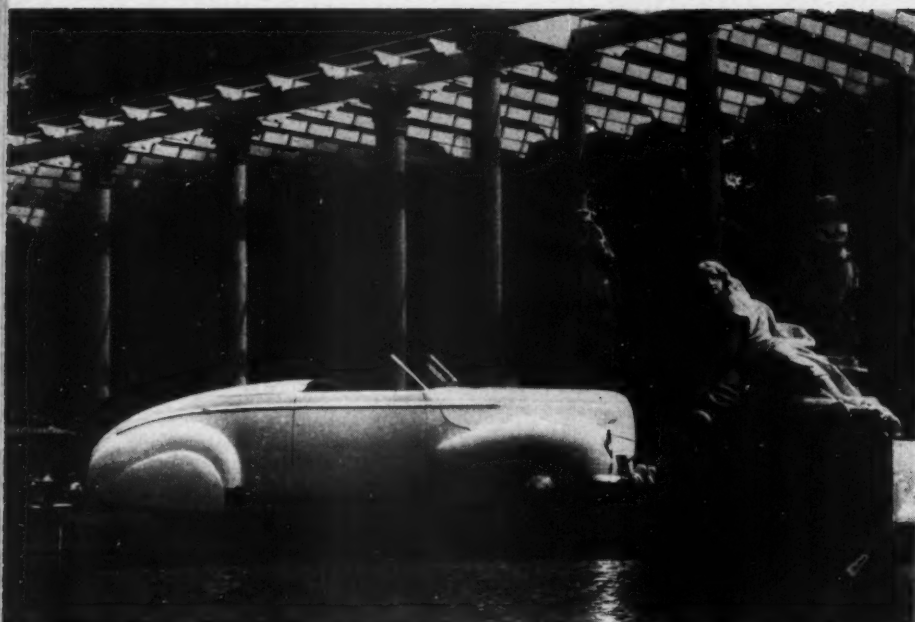
INDEPENDENT FRONT suspension is accomplished by transverse leaf spring on top, A-arm on bottom. Car weighs 905 lbs., has 28 bhp



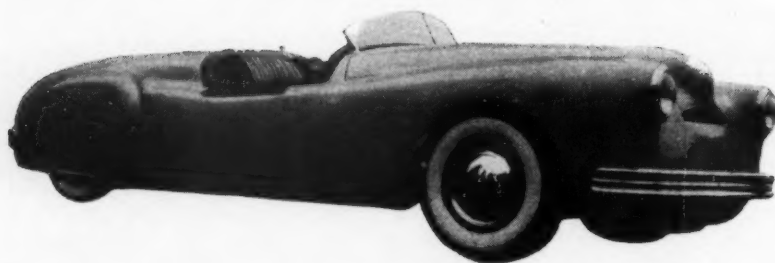
STOCK DATSUN chassis supplied many components for competition cars, but engine, transmission, and suspension were very radically changed



EXHAUST SIDE of Ohta-designed Datsun engine shows F-head rocker arm covers, exhaust system, "ram" intakes for sidedraft carburetors



RESTRAINED AND immaculate modifications mark the '39 Mercury of Max King Jr., Morristown, N. J. Note filled grille. Rear-deck curves smoothly down to rear bumper, around to fender



all how far you want to go before you are going to stop.

When a member of the conservative group *does* make a change, he generally joins the chop-and-channel fraternity. This group has been made famous by the Barris ("spell it with a K") Kustom Shop and the Ayala "Auto Butchers." This by no means is meant to imply that these are the only builders who have successfully followed this line of thought, but it will have to be admitted that they are the most productive and most widely publicized. Recent outstanding examples in the category are the Griffith-Ayala '42 coupe (featured in the October '51 issue of *MOTOR TREND*) and the Uritta-Barris '41 Ford sedan (pictured). This latter car typifies the product of this school: chopped and channeled; slab side broken up by the use of fade-aways; a long smooth curve running from the top of the chopped top to the rear bumper, following the rear fender line; all chrome removed; all doors pushbutton-operated.

The third school, the unique-influenced-by-European-design, is undoubtedly the most difficult to categorize. A car can be unique, yet not qualify for inclusion in this group because of the fact that its basic design pattern does not possess a

SPORT CUSTOM of Joseph H. Thompson Inc., Ypsilanti, Mich., was designed by Eddie Lyke. This car can be regarded as a variation on the dechromed custom school, has English feeling



EXCELLENT EXAMPLE of the Continental-inspired school is the Furlong-Doray '49 Ford of Miami Springs, Fla. Notable are the low-slung spare at the rear, flowing pontoon lines, simplification of grille. But the bumper guards detract from grille, low hood height, otherwise clean appearance



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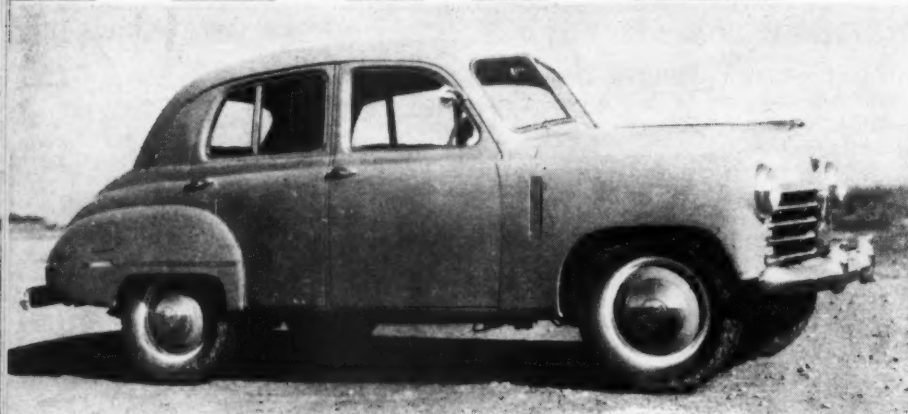
January 1952

Twenty-three

CARS IN THE FAR EAST

AN ON-THE-SPOT CORRESPONDENT
REPORTS ON BIG CHANGES IN THE
AUTOMOTIVE LIFE OF MODERN JAPAN

By Isamu Uchiyama



TOYOPET PASSENGER car is a midget, but is larger than Datsun, has 27 bhp L-head engine

DATSUN STATION wagon is popular utility vehicle. This type accounts for bulk of Japanese output



IN THE FEW YEARS that have passed since the end of the recent war, Japanese industry has recuperated remarkably. A glowing example of this recovery is the revival of the islands' motor industry.

The present matching of full-scale pre-war output, however, is nothing to rattle the export-minded overseas manufacturer: only 1594 Japanese cars were built last year. But something unusual has just happened on the Japanese automotive scene—something that may bring the Land of the Rising Sun right into the violently-competitive international market. But before tackling the news, let's examine the historical background.

Pioneer car builder of this little archipelago is the Nissan Motor Company of Yokohama, which began producing low-priced Datsun midget cars in '33, cars based upon earlier models previously made under other names by Nissan's af-

filiated manufacturers. Due to the slim financial resources of Japanese industry today, "modern" Datsuns differ little from their ancestors of the thirties.

The Toyota Motor Company, located in a rustic setting in Aichi Prefecture, was set up in '33 as an offshoot of a famous loom works. It has continued to grow and produce trucks and passenger cars through the intervening years, and now makes the Toyopet. Both Nissan and Toyota, although their total output is low, have always maintained some export trade with Korea, the Southern Islands, and the Asiatic mainland.

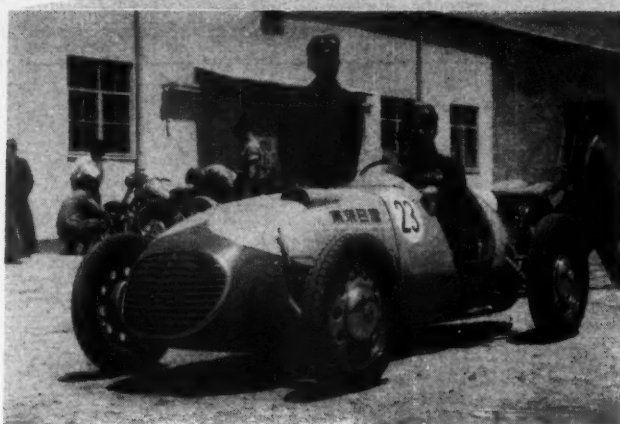
One of the things lacking in the Japanese automotive scene and something which every other car-producing country possesses, is sporting competition. Improvement of the breed and enthusiasm for motoring in general have suffered in consequence.

But now the picture is changing. With-

in the last 12 months two sports car clubs have sprung into existence—SCC of Japan and MG Car Club—and racing is becoming established as a popular sport.

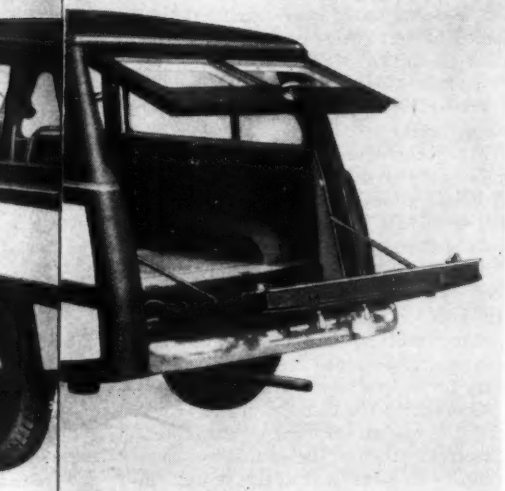
So far, the new racing movement has resulted in the appearance of two Japanese-built competition cars: identical, 750 cc Datsuns. Both were entered in the first American-Japanese sports car race last year where one beat a Crosley Hot-shot to the immense delight of the native spectators. The Crosley had reigned as a heavy favorite before the race but the Dat Queen, as the home entry was called, negotiated the 2½ miles in 3:41.3, 13.7 secs. ahead of the American car. Bringing up the rear, almost neck-and-neck with the Crosley, was a pre-war Datsun.

The Dat Queen, and its mate the Dat King, were the result of collaboration between the manufacturer and a new firm,



ENGINEER OHTA, designer of the new Japanese competition cars, sits at wheel of Dat Queen (above), in which he was successful in first American-Japanese sports car race. Engineer Kobayakawa from Nissan factory also drove

BUSINESSLIKE-LOOKING Dat Queen (above, left) has tread wider than half its wheelbase. This, low gravity center gave handling qualities that made up for any lack in engine or brakes



Wide Field Motors. Wide Field is headed by sports car enthusiast Yuichi Ohta, a young executive with a keen interest in both sports and racing machines and a member of the newly-formed SCC of Japan. He is the designer of the Datsun competition machines and was also the driver who beat the Crosley.

The competition Datsuns show little resemblance to the production car on which they were partially based; rather, they look like little 4CLT Maseratis. The 45.58 cu. in. engine uses an F-head valve arrangement, twin side-draft Solex carburetors, and operates at 7.6:1 compression ratio. Two of the three main bearings are ball bearings. Bore and stroke of the four cyls. are 1.52 x 1.65 ins., and horse-
(Continued on page sixty-one)

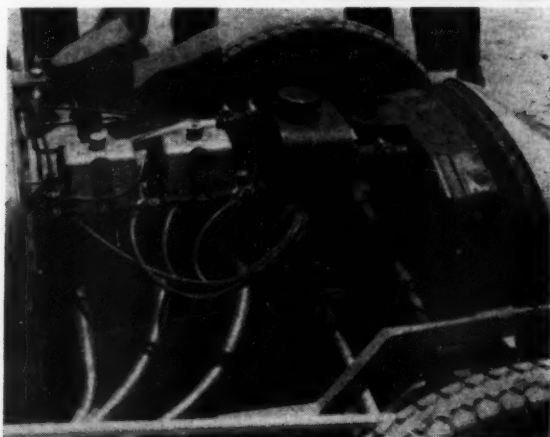


INDEPENDENT FRONT suspension is accomplished by transverse leaf spring on top, A-arm on bottom. Car weighs 905 lbs., has 28 bhp



STOCK DATSUN chassis supplied many components for competition cars, but engine, transmission, and suspension were very radically changed

January 1952



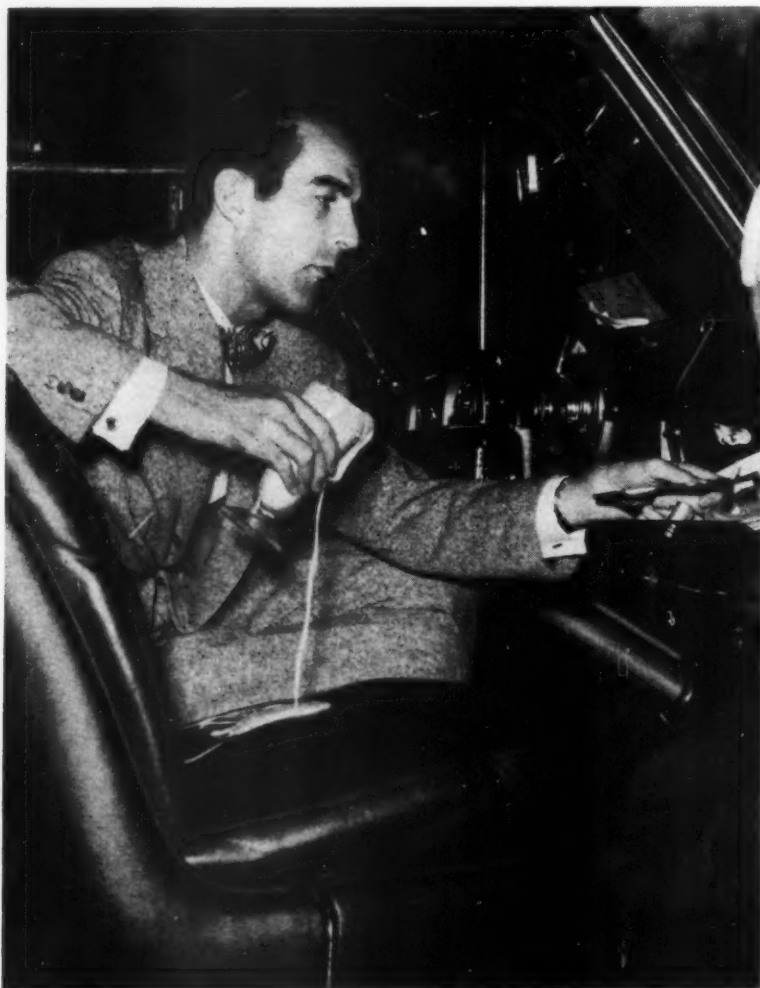
EXHAUST SIDE of Ohta-designed Datsun engine shows F-head rocker arm covers, exhaust system, "ram" intakes for sidedraft carburetors

Twenty-five

SEAT COVERS

why and what kind

BY DALE RUNYAN



Twenty-six

A noted custom upholsterer tells you of his experience with a common but little-understood accessory

THE QUESTIONS most often asked by a new car owner are: "Should I buy seat covers now or wait until the upholstery begins to show wear? Will the preservation of seat upholstery afforded by seat covers increase the resale value of the car enough to pay for the covers? Or would it be better to use the upholstery, then purchase seat covers before selling the car?"

Most upholstery materials used in automobiles are notoriously short-lived, usually have textures that make it quite difficult to slide in and out of the car. They fade and deteriorate from too much exposure to the elements, and tend to collect and retain dust and stains. If you use your car primarily for pleasure and garage it most of the time, however, you may conceivably use the factory upholstery for as long as you keep the car.

Considering the used-car market, there is little wisdom in buying seat covers merely to preserve the upholstery, since a car with good seat covers brings, in most cases, as much money as the same car with original upholstery. If you want seat covers they should be purchased to fill your own special needs. For example, if you are in and out of your car constantly, you will need a cover which makes sliding easy such as a fine, smooth fabric or fiber. If you carry pets in your car, you may want a cover of solid plastic, which will wear long and clean easily. One of the popular plastic materials is Fabrilite, made by du Pont.

The choice of materials for seat covers is as unlimited as the imagination. In fabrics, rayon, cotton, nylon and various mixtures of the three are available. Most practical of these is heavy, finely-woven cotton, since it is comfortable, long-wearing and washable. Many of the rayons offered as seat-cover materials are inferior. Some nylons are difficult to keep clean, have a tendency to fade rapidly, and usually are prohibitive in cost.

Motor Trend

A sensible seat cover material is the woven fiber so popular a few years ago. Made of twisted paper and embodying the insulating quality of paper, this fiber is cool in summer, warm in winter, comfortable, and easy on clothing. Recent covers made of this material are *almost* sun- and moisture-proof.

Most popular, of course, are the woven plastic materials. They have been successfully sold to the public on the claim that they are color-fast, impervious to sunlight, acids, solvents, soaps, greases, and are also long-wearing and static-proof.

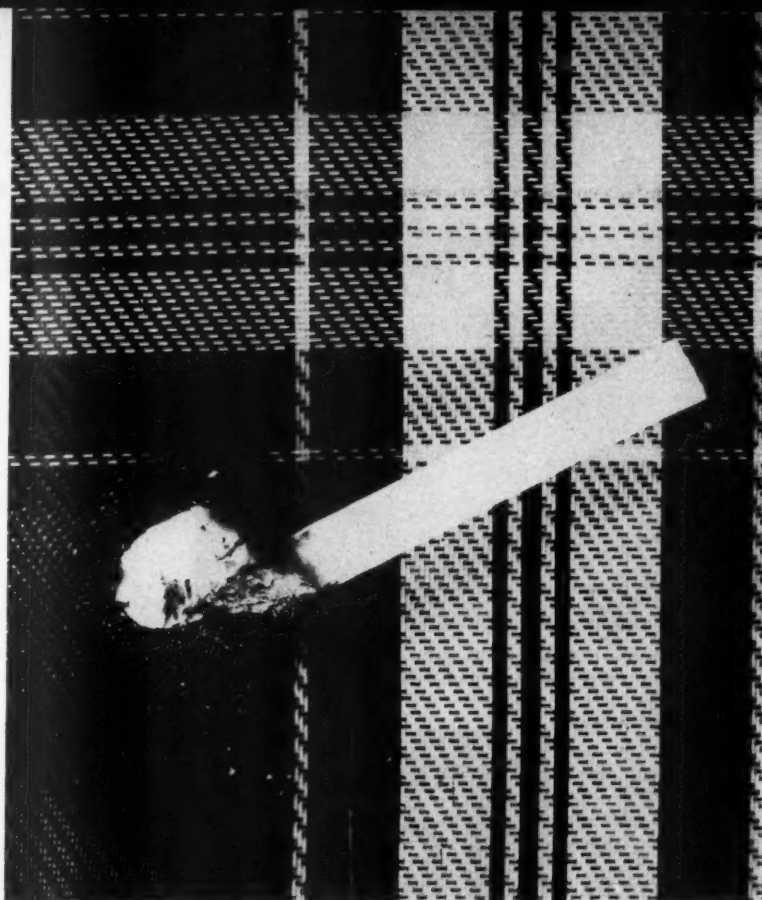
In truth, these materials are impervious to almost everything except a spark from a cigarette or pipe. They are long-wearing unless they come in contact with something sharp or highly abrasive. But some are not as static-proof as they should be—test for that quality before you buy. They are impervious to sunlight and heat although in extremely hot weather they, like most materials, reach a temperature that practically prohibits entrance to the car.

It is best to trim the covers with a good plastic leatherette at points of wear and exposure such as the top of the backrest and the leading edge of the cushion. Welts should be made of the same leatherette since they protect—and therefore get more wear than—the rest of the cover. Ready-made seat cover welts may be far inferior in quality to the trim used.

Most auto upholstery stores carry a complete stock of various types of seat covers to fit all cars. These may be purchased at prices ranging from \$14.95 to \$34.95, plus installation charge.

If you want luxury, find a good custom seat cover shop but be prepared to pay the difference between custom and mass production work. Custom seat covers, depending on materials and style, should range from \$35.00 to \$75.00 and can very easily be worth more.

As in many other lines the custom trim-

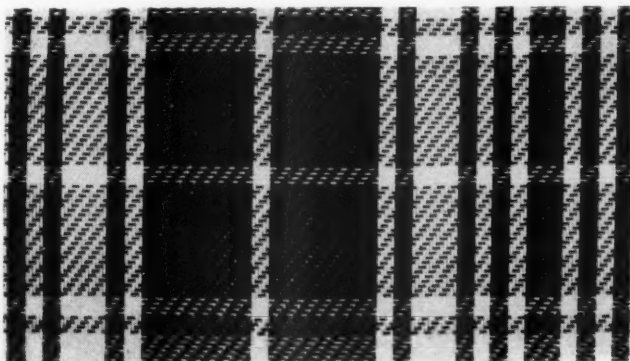


PLASTIC MATERIAL breaks down instantly when exposed to flame or spark, leaves no ash or other residue. Edges of hole, as seen in picture, will become sharp despite tiny size of fibers

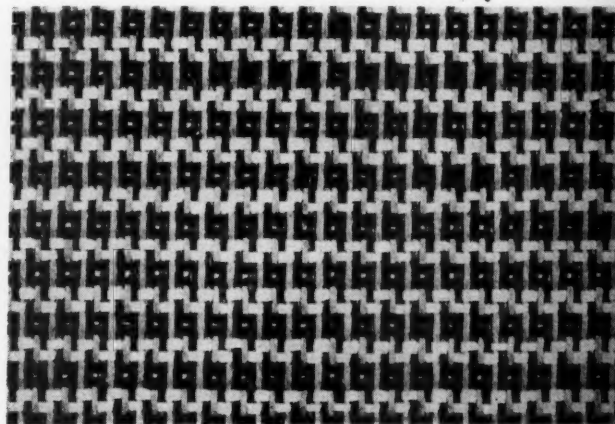
mer, along with the honest ready-made dealer, is the victim of the misleading advertising of unscrupulous competitors and as a result is often expected to do custom work for prices which are too low to permit him to stay in business.

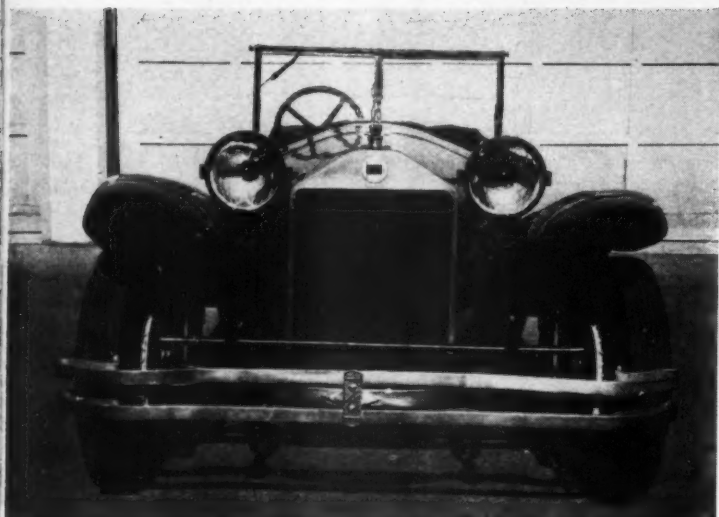
This writer has personally chased down a number of advertisements which offered seat covers for a ridiculously low price, only to find that the advertiser was temporarily out of the covers advertised. As a consolation he would offer a "super-

lative" cover made of "much better material" at a "wholesale figure far below cost," but many dollars more than the advertised price. Considering the continued success of the companies that offer everything at a little below cost, or sometimes half-price, it seems reasonable to assume that many customers let wishful thinking take the place of sound reasoning. When you buy seat covers, be wary of bargains and analyze your own personal needs.



TEXTURE AND SMOOTHNESS rank high in choosing seat covers. Coarse paper (right) is smoother when torn or broken than tightly woven plastic material above. Paper material costs a third as much as plastic



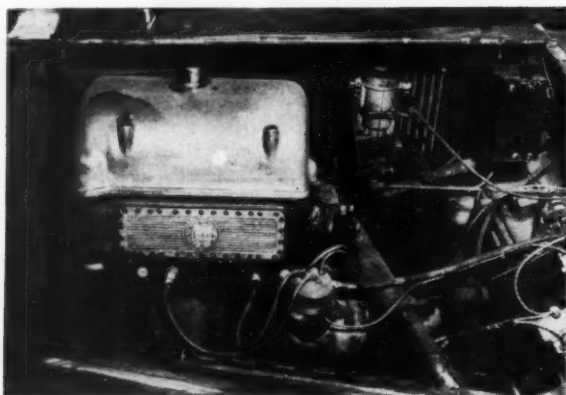


LEAN AND LANKY thoroughbred, '26 Lancia Lambda already had independently-sprung front wheels, used small, four-cyl. oh camshaft engine

Lambda, Dilambda . . . Aprilia, Aurelia

When Vincenzo Lancia named his cars, he thought of the classic past . . . when he designed them, his eye was on the future

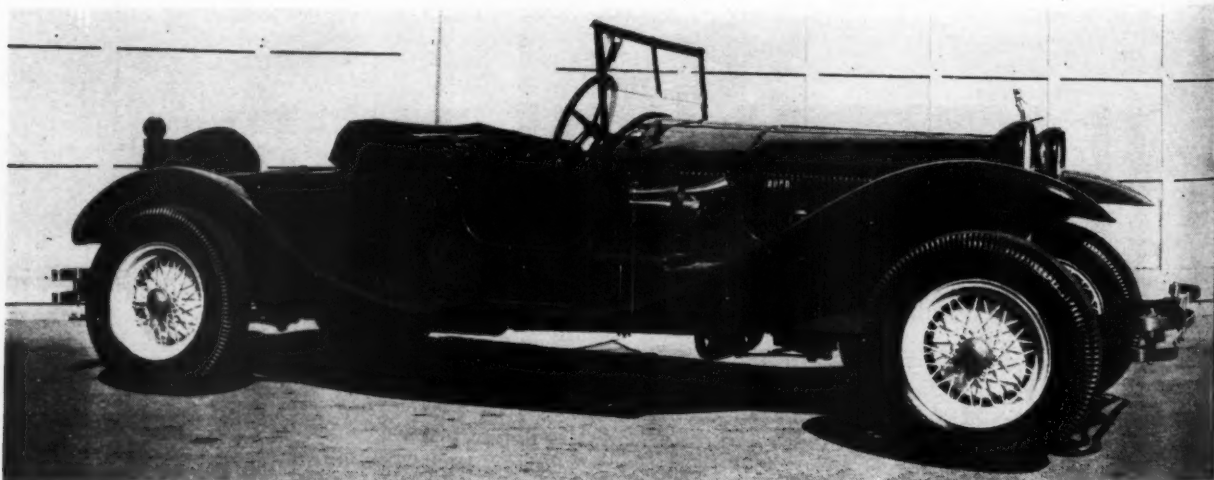
By Kenneth Kincaid



ANGLE OF V of four-cyl. Lambda engine is only $12\frac{1}{2}$ degrees, accounts for box-like appearance, makes possible single oh cam for both banks

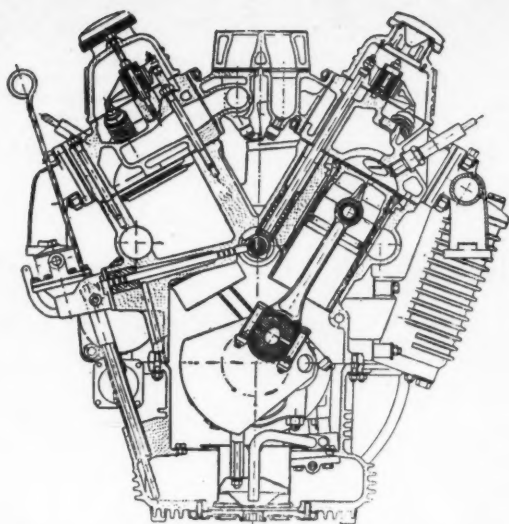
BACK IN THE flamboyant decade when Gloria Swanson was the idol of the newly-emancipated shopgirl, every movie star kept a standing stable of cars. These were selected for chic as well as for performance and quality, and one of the indispensable types was a sport runabout. It was unthinkable for anyone of means to buy an all-purpose car and actually use it for all purposes. Peasants did that, and the movie-struck millions in America demanded that the stars behave like nobles. The sport runabout, therefore, was utterly necessary for running about to sporting events or for looking sporty while running about.

Gloria Swanson, as any veteran of that generation will gladly tell you, lived grandly on the biggest reputation of all. She was the queen drawing a salary of



EX-GLORIA Swanson Lambda was a great favorite with Rudolph Valentino, has appeared in many films; next is "Belles on Their Toes" with Debra Paget
Twenty-eight

Motor Trend



AURELIA'S V-6 power plant carries on Lancia tradition of originality. Uniquely, overhead valves are inclined on blocks' long axes. Blocks are made of light alloy, cast iron cyl. liners and five-ring pistons are used



Rudolfo mana de.
COUNT LURANI takes wheel of victorious Lancia Aurelia in '51 Le Mans 24-hour race. An Aurelia finished ahead of Ferraris in the '51 Italian 1000-mile road race, the Mille Miglia. Roadability is exceptional

slightly more than \$1,000,000 a year, and if she wanted to keep her position she had to spend most of that income conspicuously enough for her subjects to see. The best was just barely expensive enough for the gossip columns.

So sometime in 1926 she bought a Lancia, specifically the lean-flanked rugged Lambda model on the cover of this issue of MOTOR TREND. It sparkled with character from guts to shell. The engine was an absolutely revolutionary V-4; the front suspension was one of the most successful early versions of independent mounting. Though the design would not tempt a millionaire today, it had then and still possesses, the timeless sort of stark beauty that belongs only to the machine in which every part is essential and in which every part is made to please the

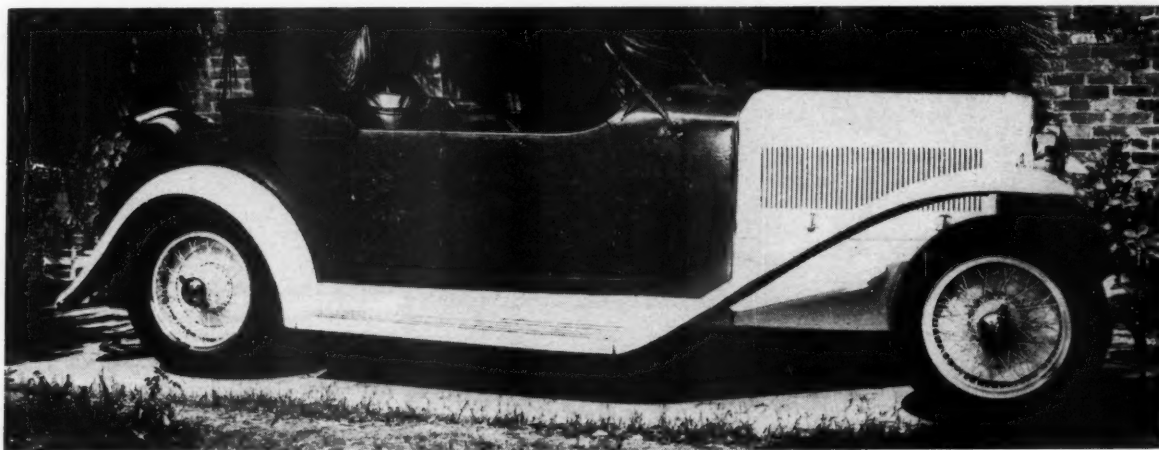
critical eye of the perfectionist engineer.

By an odd quirk of fate, both Gloria and the Lancia hit the come-back trail in the post-World-War-II years. Twentieth Century-Fox bought the Lancia for the picture "Margie," in which it appeared as the property of high-school student Conrad Janis. Then in "Cheaper by the Dozen," Clifton Webb and Jeanne Crain had a ride for the cameras, but only the most expert classic connoisseur recognized the Lancia. The plot called for a typical college car and Twentieth Century's excellent transportation department responded by stripping the skeleton fenders and installing an ungainly exhaust stack running waist high from front to rear. The best brains in the writing department contributed their bit by composing a few of those jazzy epigrams once so common


on high school boy slow-roads. Example: "Chicken—this is your roost."

In the sequel to "Cheaper by the Dozen," the soon-to-be-released "Belles on Their Toes," Jeanne Crain and Debra Paget ride in the Lancia, now restored to its original condition and painted the lusty red seen on the cover.

The Lambda engine was a narrow V-4, with the axes of the cylinders converging below the crankshaft, and with cylinders staggered. This produced, in effect, a power unit very similar to the Ariel Square Four motorcycle engine. Its bore and stroke were 3 x 4.8 ins. and displacement was 135 cu. ins. The single camshaft was located in the head and operated the valves via rocker arms which had been drilled for lightness. With rocker-box in-
(Continued on page sixty)



DILAMBDA of '27 was much bigger car than predecessor, had narrow-V, eight-cyl. engine of 240 cu. in. displacement, 100 bhp output



SUPER 88 SPRINGS and shock absorbers are excellent. We proved their ability to soften jolts by leaving the ground at 55 mph. Car bottomed hard on return to earth, but recoil was slight

MOTOR TRIALS

OLDSMOBILE SUPER 88

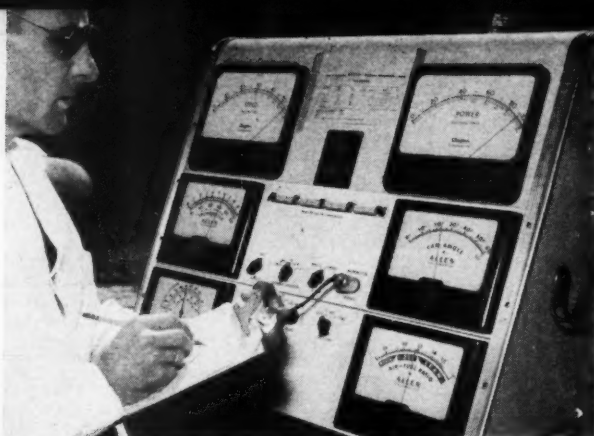


JUST HOW far the Olds heels over in a sharp turn is easy to see; this is a characteristic that makes for considerable passenger discomfort. Big tires, rolling under wheel rims—see right front here—contribute to roll and to tire squeal

Motor Trend research has to agree with Olds owners—their car is best GM product for all-around performance

By GRIFF BORGESON

PHOTOS BY ERIC RICKMAN



OLDSMOBILE TOPS its price class! For downright performance, for actual quality of engineering, you can buy no better car in the \$2201-\$2500 (FOB factory) bracket. Perhaps, depending upon your personal taste, you can get more style, prestige, or comfort for your dollar in another make, but those are subjective factors which cannot be measured with precision instruments.

In the overall survey of the 15 '51 models tested by MOTOR TREND, Oldsmobile stands second. The first-place winner will be honored in the February issue, and the other makes which have been dissected in Motor Trials will be ranked from first to fifteenth. Cold figures, read from laboratory-quality meters and gauges, have been carefully analyzed to make up the point ratings. See the February issue for the complete story.

Rock-Steady Ride

When we picked up our Detroit-allotted Super 88 at the Los Angeles Zone office, the first thing we did—to see what sort of a ride we were in for—was to try the car's suspension by pushing the fenders down, thus checking the amount of "give" in the springs. Ace mechanic Fred Bodley (our new technical editor) and I exchanged sympathetic glances in anticipation of the seasick ride to come. But come it did not! The '51 Olds turned out to be one of the best-riding cars we have ever tested.

Right here you have an example of what we mean by exceptionally good engineering: how do you go about building a suspension system that's actually as limber as a sapling, but which can still make a man like Bodley say, "You know, this baby has a firm ride." For one thing, it involves clever use of good shock absorbers. Beyond that, we're not at all sure just how it's done. But the essential result is that rebound is extremely gradual as in the suspension of a good racing machine. You hit a bad bump and wait to be pitched upward on the rebound. But you're not: the body just eases back to its normal relationship to the frame so gradually as to be unnotice-

able. Hitting vicious dips at high speed fails to provoke bottoming. Flying over the crest of a rise at 55 per and making all wheels leave the ground and coming down with a savage smack *does* make everything bottom, but there are no secondary effects. The shocks take hold after the first thud and it's smooth sailing from there on. Incidentally, the '51 Olds has lost the coil springs at the rear, having gone back to trusty old half-elliptics.

Olds has one of the best rides in America today, but the perfect balance between comfort and stability is a hard one to reach. Cornering, our test car rolled heavily, to the embarrassment of the passenger who hadn't a grip on the wheel to steady him. Steering through turns had that characteristic GM heaviness that requires a firm grasp to keep the wheels from straightening out. The 7.60x15 tires screamed in nerve-wracking protest against tight, low-speed corners and we agreed that the Olds would be a better-handling car if equipped with smaller cross-section tires—and just as comfort-

MANNING INSTRUMENT panel of Clayton dynamo, Borgeson records high output of 92 hp at wheels—68 per cent of engine's rated bhp! Tach shows 3200 rpm, speedometer needle 55 mph

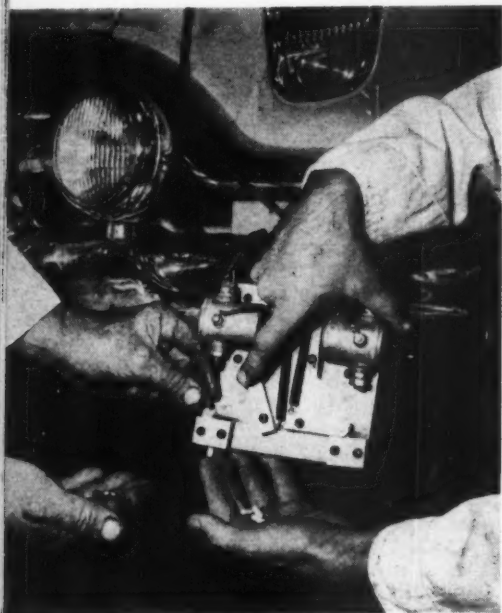
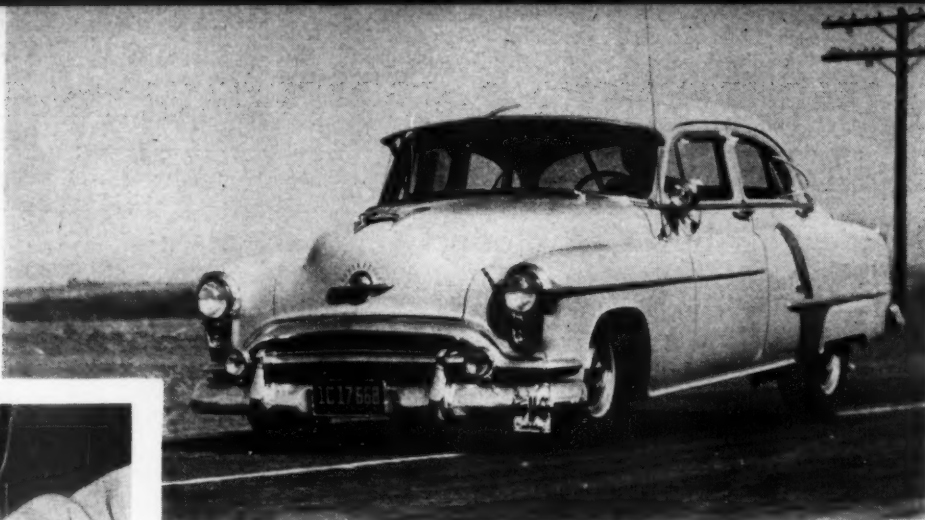
able. But in spite of these observations—typical of most cars today—Olds is good in the handling department. Going through turns at speeds that would mean loss of control for many other cars, it stays nailed to the road with a firmness that again implies good engineering.

101.88—With the Wind

Our top speed runs, made at El Mirage dry lake, were hampered by a lashing, estimated 30-mph wind, which determined our choice of direction for the flying ¼ mile. With windows cranked tight, sun visor removed, and the north wind at my back, I blasted through the traps at a timed 101.88. Thrusting back against the draft, best time was just 83.17; the

EFFECTIVENESS OF hand brake was checked on 34 per cent grade, along with Hydra-Matic's ability to put car in motion from standing start without stalling engine; getaway was smooth





LOADING THE DETONATOR: hammer is cocked, .22 blank cartridge is placed in firing chamber, on top of pigment-filled capsule. With brakes applied, mercury switch breaks circuit to solenoid, releasing hammer, firing charge onto pavement instantly for accurate measurement

FAST STOP from 45 mph shows terrific deflection of springs, pitching of body. Extreme deceleration is bad enough, but becomes even more dangerous for passengers when high degree of forward pitch takes place. However, the brakes themselves were good, did not fade, lock

average speed for four runs boiled down to 92.54, almost one mph better than our '50 Olds (July '50) test car turned.

There are many automobiles today which are capable of above-90 speeds. Too many of them become unpleasantly unstable above an actual 70 or 80 mph. Here, again, the Super 88's fine suspension paid off: the car stuck to the lake bed at 100-plus and, believe me, it's good to drive a car like this—one that's not too big for its own britches.

Gobs of Go

Our '50 Olds test car packed low-speed, high-dig 3.9:1 optional rear end gears and

its acceleration times were markedly higher than those obtained for the '51 Super which carried standard, 3.64:1 gears. Even so, the '51 is one of the snappiest get-away jobs on the market. If you're willing to sacrifice some fuel economy for acceleration, the 3.9 gears are still available and will give you the hottest "draggin' wagon" that we've tested to date.

Since both the '50 and '51 machines weigh the same and since both delivered the same amount of power to the driving wheels on the Clayton dynamometer, comparison of their acceleration times tells you what can be expected with either gear ratio. Average acceleration, covering all tests, was 11.71 secs. for the older car, 14.13 for the higher-geared '51. The '50 Olds did the standing ¼ mile in 20.93, while the '51 Super took 21.57 to cover the same distance.

Good on Gas

You can take a run-of-the-mill engine, gear it to a higher rate of wear, and come up with a furious getaway. Or, you can gear it up, making each rpm count for wheel travel, and get high top speed. But to get speed, dig, and fuel economy, you've got to build the engine to fit those requirements. It must be engineered to do all of its jobs well.

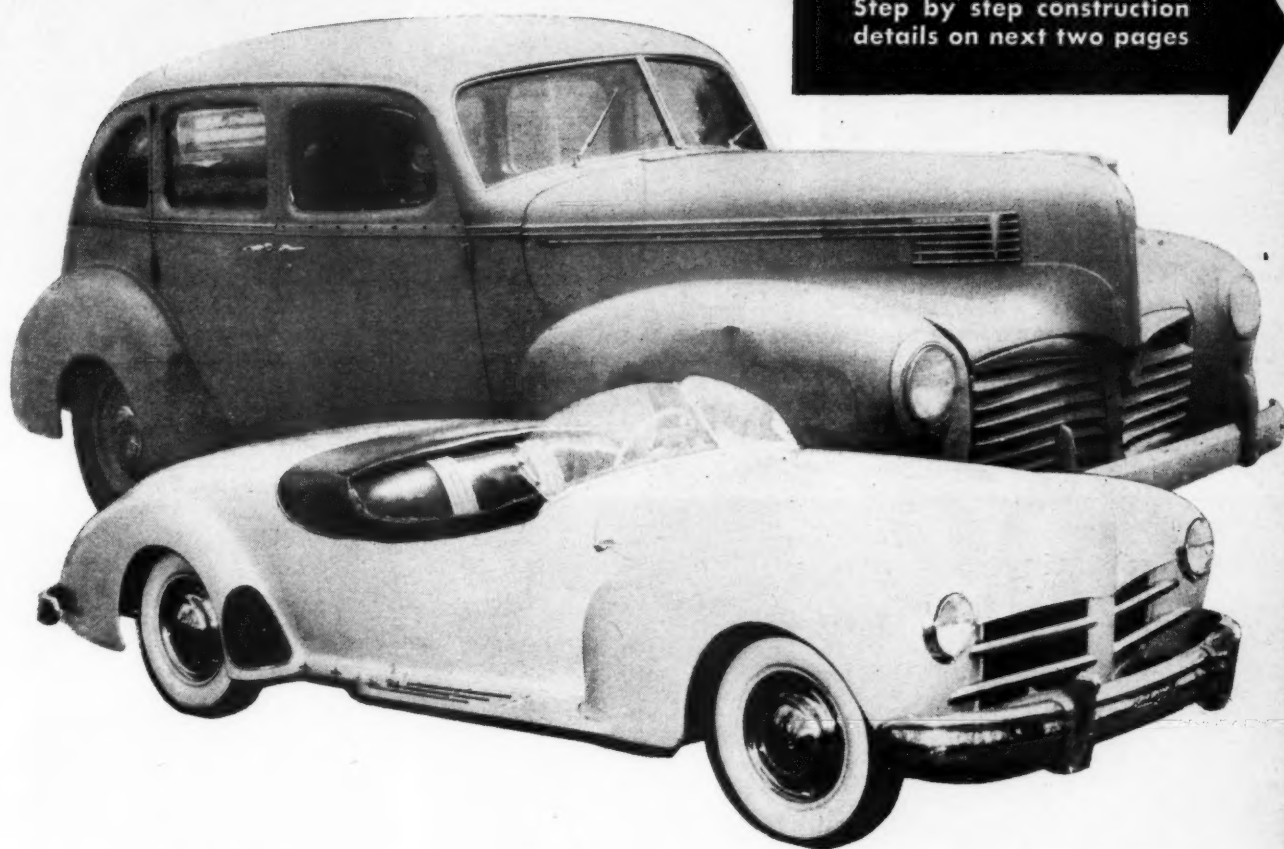
The Olds executes its designed duties faithfully and efficiently. In terms of absolute miles per gallon it is not outstanding. But for ton-mpg—the common denominator used in the Mobilgas Economy Run for evaluating cars in terms of fuel used to move a given weight—the Super 88 rates well. Our average, for all types of traffic, plus steady speeds up to 60, was 17.5 mpg. In ton-mpg, our test Oldsmobile rated with the top four makes out of the 15 '51 cars we have tested.

(Continued on page fifty-two)



BODLEY CONTROLS dynamometer load by remote switch. Car's instrument panel, dashboard are very clean and attractive; chromed glove compartment and radio grids are NOT made of pot metal. Fuel measuring device can be seen on window of right front door. Note roomy entrance

Step by step construction
details on next two pages



FORMULA FOR A SPORT CUSTOM

**Charles Martz mixed two
junkyard Hudsons with \$700
and seven months' labor,
concocted a cover car.**

**What's more, he shows you
how to do it.**

By **CHARLES MARTZ**
Photos by **Virgil Ruddick**

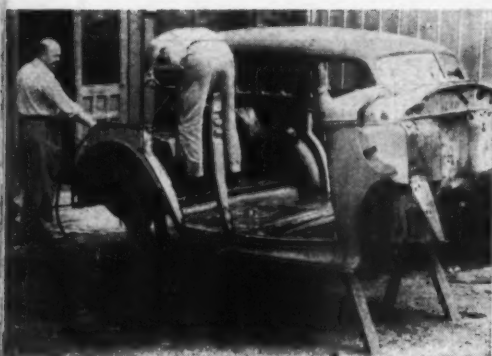
FROM THE mating of two sagging Hudsons came a buttercup-yellow sport custom car that rides like a cloud, climbs like a cable car, runs and corners like a dog-track rabbit and pulls curb crowds like a price war in a steak shop.

Completed in less than seven months—largely by non-professionals—and costing less than 700 skins, the car sports Chevrolet head lamps, Pontiac tail and back-up lights, Studebaker rear-view mirror, Lincoln radiator, Dodge front bumper, Nash instruments, red plastic upholstery. Grille, windshield, and running boards were cut from new material.

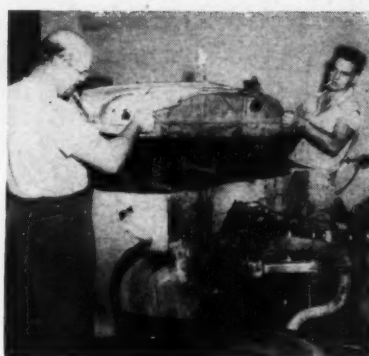
This picture preview features photographs selected from our book, "Build Your Own Custom Sports Car," about to be published. These photos give you the highlights of our car-building adventure and the complete book tells how you can do it on your salary, even if you are underpaid.

I cut plenty of corners to build the car shown on these pages. I traded my golf.

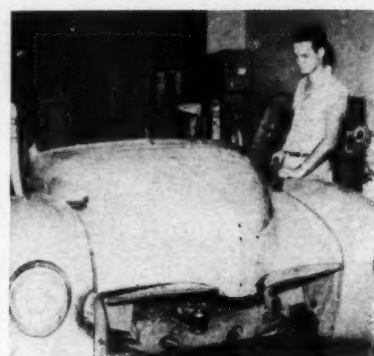
(Continued on page thirty-six)



1 HUDSON BODY was stripped from chassis, trimmed of fenders, top; then scrubbed clean. Second Hudson, in background, contributed a few extra parts



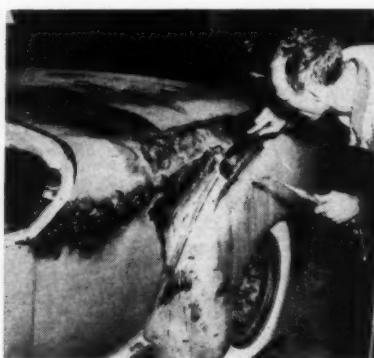
2 AFTER BODY was replaced on chassis, this horizontal cut was made with power hacksaw. Cut line falls just below instrument panel on inside of car



3 STOCK HOOD has been sectioned to fit new engine-compartment contour. Fenders have been replaced. Hood sectioning also served to remove chrome



7 FRONT SECTION of old top was split in center. Two sweeping curves into doors were not altered. Man at right is attaching wood as base for upholstery



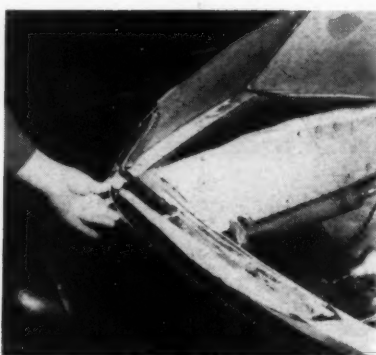
8 UP THE JOINT with paddle and torch. Skilled body craftsman fades back fenders into body with smooth curve and evens out rough spots at same time



9 LUCITE, STILL in paper cover, has been cut to pattern by band saw, is being bolted to stainless steel brackets similar to those designed for motorboats



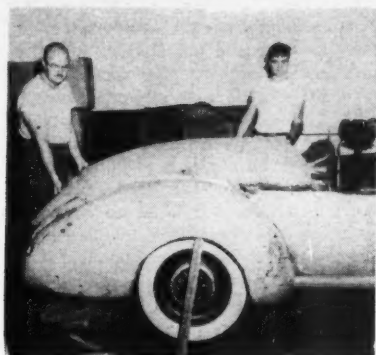
13 QUARTER-INCH waterproof plywood is attached with metal screws. Steering column was lowered. Stock Hudson shift lever was replaced in the floor



14 SOFT ALUMINUM trim was hand formed and attached to the body just outside the cockpit. It holds the rolled-over edge of the plastic upholstery in place



15 THICK PLASTIC is pleated in place over 1/4-in. sponge rubber which was pasted down with 3M trim cement. Pleating is careful, ticklish job



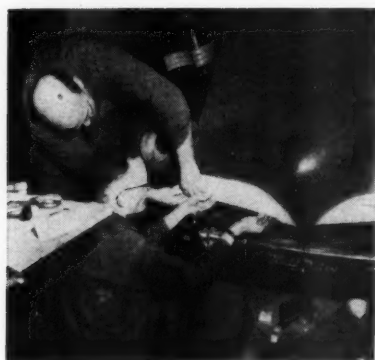
4 NEW REAR deck was cut from Hudson's hard top, fit perfectly between rear fenders. Doors were stripped, sectioned, clamped in place for welding



5 POWER DRILL makes holes for self-tapping screws which hold deck in place for welding. Dark strip is new metal, one of two such panels used



6 REAR WINDOW of old top provided ready-made opening for new spare-tire compartment. Tack welding between metal screws was done with arc



10 HORIZONTAL EYEBROWS were padded with canvas, attached with bolts, faded into hood with Met-L-It. Front bumper is stock Dodge equipment



11 FINISHING TOUCH for front of car is addition of grille, cut from two-in. aluminum tubing and secured in place by bolts in fenders and center piece



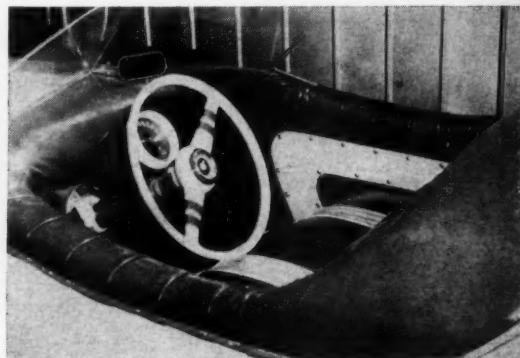
12 FINAL SMOOTHING is done with body putty and wet sanding. There were literally hundreds of tiny cavities and scratches that required this treatment



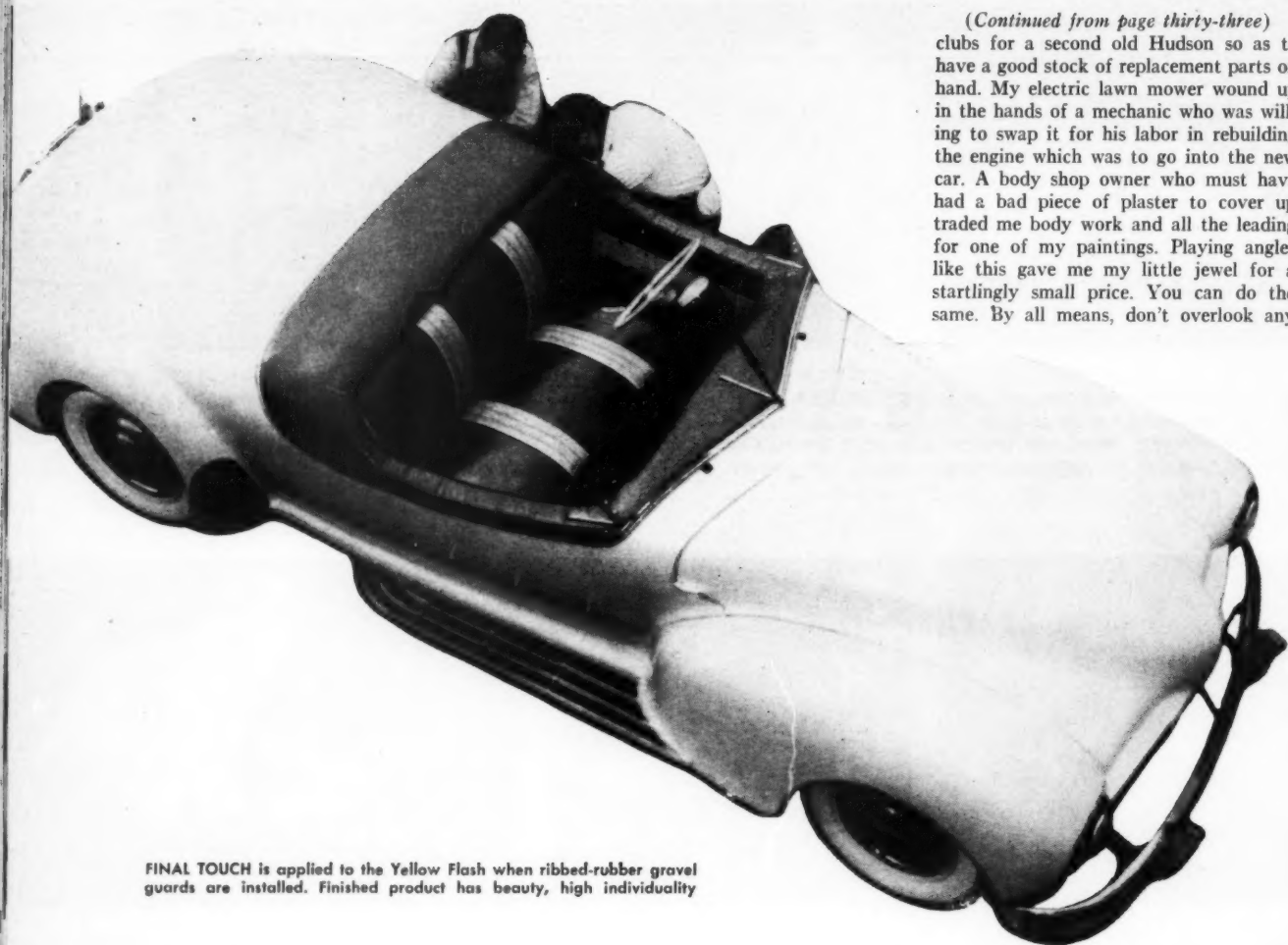
16 SPARE-TIRE STORAGE space is covered by section from Hudson deck lid. Bumps are back-up lights. Rear bumper is from stock post-war Hudson



17 STARKLY FUNCTIONAL running boards were made up with steel slats 1/4-in. thick. Bolts to body are standard 3/4-in. Smaller bolts attach to fenders



18 "SHAPES" ON door panels were cut out of Presdwood and covered with chartreuse plastic to give the interior a modern touch and also cover tack heads



FINAL TOUCH is applied to the Yellow Flash when ribbed-rubber gravel guards are installed. Finished product has beauty, high individuality



(Continued from page thirty-three)

clubs for a second old Hudson so as to have a good stock of replacement parts on hand. My electric lawn mower wound up in the hands of a mechanic who was willing to swap it for his labor in rebuilding the engine which was to go into the new car. A body shop owner who must have had a bad piece of plaster to cover up traded me body work and all the leading for one of my paintings. Playing angles like this gave me my little jewel for a startlingly small price. You can do the same. By all means, don't overlook any

brothers-in-law that may be handy. Mine, Monroe Hillhouse, put plenty of work into the car.

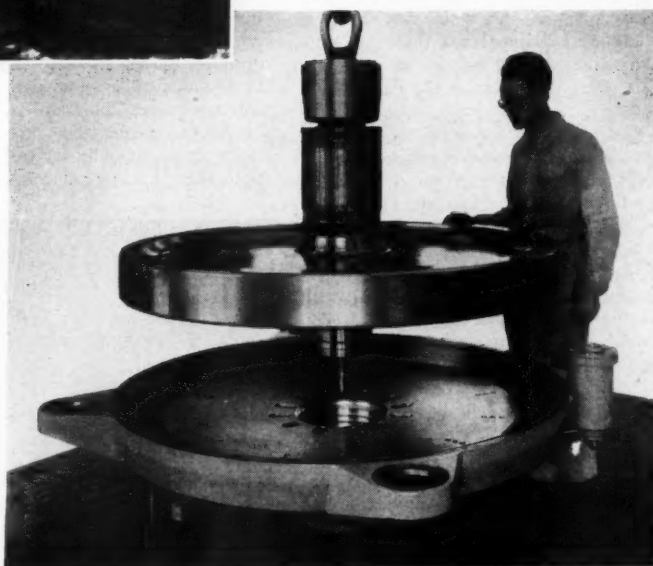
Other men here in Aurora, Mo., whose work in the construction of the car was highly important are: Ted Christian, who did much of the careful detail work such as the Lucite windshield and the two-in. hard-aluminum grille; Buck Powell, who did body and torch work; George Robinson, who handled engine rebuilding and re-wiring (I miss that electric mower!); Wayne Schnelle, who did the wood work which was the basis of the upholstery; and John Wilson, who did the leading in Raymond Ham's body shop.

Some dimensions of the car will be of interest: Front of hood is 40 ins. above the ground and the hood is low enough to permit both fenders to be clearly visible from the driver's seat. The hood then slopes back ever so slightly to a height of 39 $\frac{3}{4}$ ins. at the cowl and armrests drop to 34 ins. The body was sectioned 5 $\frac{3}{4}$ ins., overall length is 204 ins., ground clearance is 7 $\frac{1}{2}$ ins. It's a thoroughly comfortable and practical car.



GYROBUS PAUSES to drop passengers, pick up flywheel speed. Three overhead levers can contact overhead current supply at each bus stop

"ENGINE" OF the new Swiss bus is "Electrogyro," shown with upper half of casing removed; the armature is visible on upper half



AUTHENTICATED NEWS PHOTOS

the GYROBUS

Something New
Under the Sun?

NEWEST WRINKLE in the motive power scene appears in the Gyrobuses of Zurich, Switzerland. Like any other trolleybus, these run on rubber tires and, like their electrically driven brothers, are silent and odorless. But there the similarity stops.

The Gyrobus requires no overhead trolley, no vast load of batteries. The wheels are driven by a three-phase "squirrel cage" motor which gets its power from a flywheel with a vertical shaft. An electric motor is built around the flywheel shaft and its job is to spin the flywheel at bus stops, where electricity is available. The motor accelerates the flywheel up to 3000 rpm, which promptly stores up a certain amount of kinetic energy in the wheel. When the motor is switched off and excited with condensers, it becomes a generator and is then capable of reconvertng the energy stored in the flywheel into electricity. Therefore, the flywheel supplies the energy for motion during the run, gradually slows down, is spun again at the next stop.

Sounds complicated but, as the pictures show, this unusual propulsion device is simplicity itself.

CUNNINGHAM

Bentley says the Cunningham C2 is a gallant and promising attempt to revive the forgotten tradition of the American sports car

By JOHN BENTLEY

PHOTOS BY WELLS STUDIO, WESTPORT, CONN.

SNAP JUDGMENT of the Cunningham sports car, based on casual observation or, worst of all, on hearsay, has resulted in some wild opinions being formed as to its purposes, performance and possibilities. The impression in some quarters seems to be that this machine is a slap-happy combination of bits and pieces, assembled as a temporary plaything for a favored few and deriving its speed solely from brute force. Having run the first comprehensive road test on the Cunningham C2, I can state categorically that any such views are far from the truth.

The machine lent me for test purposes was Briggs Cunningham's own team car which had placed fourth, with an average of 73.6 mph, in the Watkins Glen Grand Prix only five days before. Nothing whatsoever had been done to it since the race, and this car was furthermore the least "souped-up" of the team trio. Here it should be explained that there are now six completed Cunninghams in existence, with others under way at the Palm Beach factory.

Now to answer a question that I have been asked by more people than there are words in this article: What does it feel like to drive a Cunningham? The answer in one word is "great." The car appears to have no vices, and if purposely broken loose on a curve, can at once be corrected by the quick, yet light steering which requires only $2\frac{1}{4}$ turns from lock to lock. Pitman arm adjustment offers choices of $2\frac{1}{4}$ to $3\frac{1}{4}$ turns, which is enough for anybody. The Borg and Beck heavy-duty clutch has a surprisingly light foot action, but you don't need to be told when it's in. It really grips.

Acceleration in low gear is of the catapult variety; in second really sharp; and

in high quick enough so that the lazy driver doesn't need to shift often. Even when you kick the treadle down from a brisk walking pace in high gear, the tremendous engine torque brings instant response.

Maximum speeds reached on the car tested were 60 mph in low (5200 rpm), 100 mph in second (5033 rpm) and 124 mph in high (4500 rpm). Normal highways not lending themselves to higher speeds for certain obvious reasons, I readily accepted Phil Walter's word that the Cunningham was timed at 152 mph (5500 rpm) through the Aston Martin trap at Le Mans. That was because at 124 mph there was an embarrassing amount of throttle left and the car seemed to say: "What are you waiting for? Let's go!" With only one hand on the wheel it steered as true as an arrow and no engine or body vibration could be detected. The impression I got from behind the big, protective windshield was one of rocklike steadiness though, as Walters pointed out, the Cunningham's speed can be dangerously deceptive. You seem, as in the Jaguar XK120, to be going about 40 mph slower than is actually the case, and when approaching a corner during a road race

this can lead to serious trouble. Hence Walters and Fitch both keep an eagle eye on the tach at all times.

The high-pitched, siren-like sound of the big 7.50x15 Firestone racing tires (40 psi and no special rims required) is music for those who appreciate such things, but the exhaust note definitely is not, by anybody's standards. At over 5000 rpm the engine rumble becomes a harsh, racking boom that conjures up alarming pictures of rods flying through the crankcase and other costly phenomena. This is due solely to the design of the twin mufflers which could stand a lot of damping down and appear to respond at an unpleasant frequency. Customers will be given a choice between 7.10 or 7.00x16 tires for ordinary use, and may select a 3.27 or 3.54 rear end ratio. They can even have a speedometer, radio and heater if they wish. Number one Cunningham is so equipped, but the team cars are not. Number three, our test car, has a 3.54 axle and a dash conversion chart permitting quick, accurate mph computations. In fact, the dynamometer mph reading matched exactly the tabulated conversion from the electric tach. Pretty good.

The Cunningham's brakes are fantas-

LAVISH INSTRUMENT panel on Cunningham team cars includes oil- and water-temperature gauges, fuel pressure indicator, electric tachometer and heat dial that reads off temperatures in seven different locations by turning switch (at right, beside rpm conversion chart)



tically powerful, (see performance table) and though of Cadillac origin they have been improved to a 40 per cent more efficient stage. Brake tests were purposely made on a rough, bituminous surface sprinkled with loose stones, yet the car never swerved, even after the wheels locked. There was a one-sided nose dip stemming from torque reaction, but nothing to worry about. No sane person tries to stop in 134 ft. from 60 mph!

The steel brake drums measure 12x2 $\frac{3}{4}$ ins., have cast-iron inserts and are aluminum-metallized as an anti-rust precaution. Special Raybestos linings are used, giving a friction area of 241 sq. ins. Close attention has been given to the problem of heat dissipation, with results so good that brake fade is non-existent and all three team cars finished at Watkins Glen with as much brake "pedal" as they had at the start. The front drums have no backing plates and are cooled by multiple brass scoops. The rear ones feature diagonal blades around their perimeter and at speed are virtually sirocco fans.

Number three Cunningham has only two noises that didn't belong. One was a minor rattle from a float chamber in one of the gas tanks. The other was a "clonk" occasioned by slightly loose splines on the left rear driving axle—not much to complain about after a couple of long road races with no overhaul in between. There were no body squeaks or protests. This is partly attributable to the fact that not only is the engine three-point mounted on rubber, but the entire drive assembly rests on rubber bushings.

The cockpit is without doubt the roomiest of any sports car. You can swing your elbows and stretch your legs freely. The seats are adjustable three ways—for tilt, height and leg-length. The car tested didn't have a passenger door, as this is not required by racing regulations; but the production jobs will be so equipped, and car number one has two beautifully hung doors with neatly concealed hinges. In fact, body finish in terms of upholstery, trim, panel beating, joints and



UNOFFICIALLY TOASTING their Watkins Glen victory are (left to right) Briggs Cunningham (fourth) and Phil Walters (winner). They, and John Fitch (second), drove the big, roaring Cunninghams

paint-work, is the equal of anything produced in Europe, outside of the rajah-priced creations by Italian master craftsmen.

The position with regard to special equipment was clarified by Briggs Cunningham thus: "We don't intend to build two separate types of car—one for racing and the other for touring. Our policy is to concentrate on one model, readily adaptable for both purposes. If the customer wants to race, we can offer him all kinds of optional extras, depending on the type of events he intends to compete

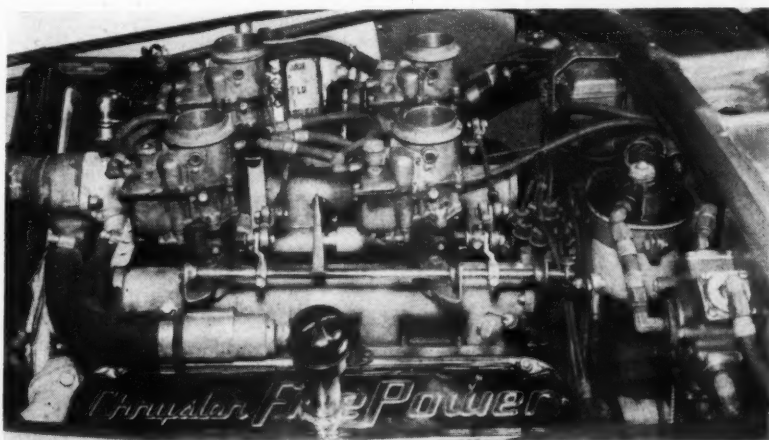
in. But he still has a sports car—not a racing car."

Phil Walters freely admitted that the Cunningham at Le Mans scaled a ponderous 4000 lbs. at the starting line, and that it was far too much. "Here's the breakdown," he said. "Starting with a dry weight of 3400 lbs., we took aboard 55 gals. of gas weighing about 300 lbs. Then there were all the tools that had to be carried in the car. Say another 125 lbs. Add the driver at an average of 175 lbs. and you're up to the 4000 mark. Dieting isn't the answer.


"That's why we're going into production with the C3," said Walters, who has had a lot to do with the new design. "Le Mans taught us many things and we plan to use that knowledge. It's not generally known, by the way, that the first four Cunninghams were built in three months, while the Le Mans team cars were shipped over with four, five and eleven miles of actual road running respectively. That's one of the things we've learned *not* to do!"

The Cunningham C3 came off the drawing board a while ago and work al-

(Continued on page fifty-three)



RUGGED BUT neat throttle linkage operating four Zenith downdraft carburetors mounted on special Cunningham manifold. This equipment is supplied with all cars as a stock installation



JEWELERS' TOOLS were supplemented with a set of Tom Thumb wrenches built by Zimmerman. Car can be completely dismantled down to its smallest components with the proper tools

PHOTOS COURTESY CLEVELAND "PLAIN DEALER"

\$1500 "T"

In 1911, you could have bought five family-size Fords for what it cost to build this tiny replica today!

by Merritt Zimmerman

YEAR before last, come Thanksgiving, I thought I'd surprise the wife with an antique model for the following Christmas. Eight somewhat sleepless months later (300-plus hrs.) I had produced what you see in the pictures, and it still isn't all there. The engine doesn't run; there's no top material on the padded and webbed top bows under the dust boot; the rod brace between fenders under the car is missing, etc.

The chassis is correct in every detail including steel channel frame with body attachment lugs, eyed leaf springs (corset stays) with clips and working shackles held together by 00-80 thd. hex head bolts.

I obtained information for my working sketches from an old Dykes, an old Audels, the Thompson museum and a trip to the Ford Dearborn museum. The '11 body style (torpedo) was completely

built from one photo on page 121 in Floyd Clymer's Motor Scrapbook No. 2. This little car scales exactly one inch to the foot, weighs a hair under two pounds, and can be completely dismantled down to its smallest components by removal of bolts as in the original. I also had to make a miniature set of wrenches plus numerous makeshift dies, jigs, and fixtures to build the model and used a Paasche air brush for the lacquer finish.

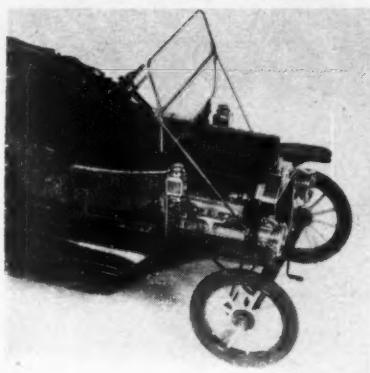
The engine has detachable head and sump-pan, head bolts are 00-90 thd., hex head, and transmission housing has magnet port. The spark plugs are 1-72 thd., there is a fan with belt and pulleys; a disengagement spring is installed on the hand crank. The intake, with carb, and exhaust manifold are held on with brass crow's-foot and 0-80 thd. hex bolts. The engine pieces are cast aluminum and mount in the frame (three points), as the original. The front axle and rear end are solid steel, milled and turned respectively, and the wheel spokes set into the hubs and brass runs are straight grain maple, simulating the original ash or oak. The tires were whittled from 1/4-in. sheet neoprene but should be white as on original.

Although the front wheels turn with the steering wheel through proper linkage, none of the wheels rotate, for safety's sake. Incidentally, on these early models the wishbone came into the axle on top side with the tie-rod and the drag-link below.

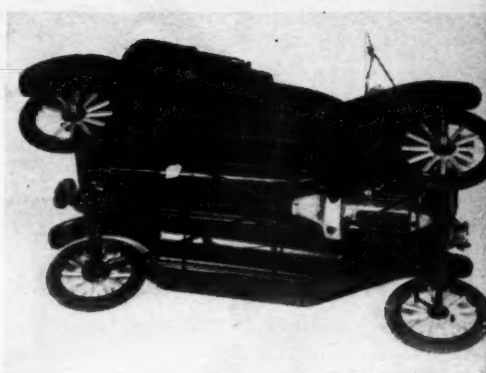
Getting back to the construction, the fenders, running boards, hood, tank, and tool box were fabricated of .010 sheet brass requiring the services of a miniature hand-crank beading machine whomped up for the occasion. The body, rails, and platform are heavily filled and lacquered pine, and the dash wall is three-ply aircraft birch, rimmed with polished brass. The doors and kick panels are also topped with brass. The radiator has water tank and tubes in the finned core, and inlet and outlet hoses to head block. All the lamps, plus acetylene generator, and horn were whittled from solid brass bar stock, the acetylene lamps having plexiglas cores. The dash oil lamps have wick and holder and adjuster along with bevel glass and red glass rear buttons.

The horn-bulb tube is a piece of stainless-steel-wound guitar string. How the brass-wire windshield rim was ground for the glass is open for speculation. Steering wheel, foot pedals, and emergency brake as well as bows were whittled from steel bar stock, although top bows on original were mainly ash. The upholstery and top dust boot are paper-thin black lamb skin, hand sewn and glued as construction demanded. The two-piece removable floor boards are covered by a mat of cloth-rubber diaphragm material. There is a detail missing on the speedometer besides the front-wheel drive. Can you name it?

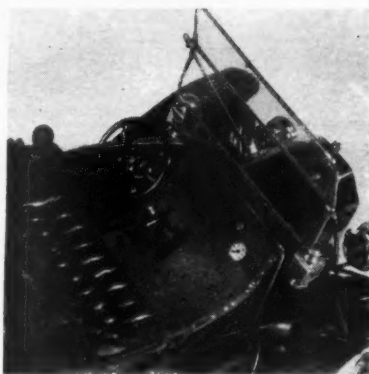
—Merritt Zimmerman



ENGINE HEADS are detachable, spark plugs are removable. There is even a disengagement spring on hand crank; engine parts are aluminum



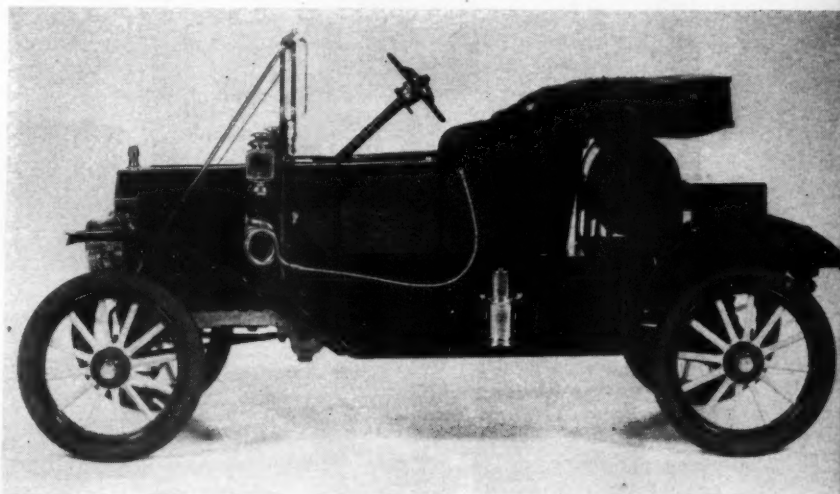
STEEL CHANNEL frame follows original specifications. Carrot stays made transverse leaf springs, spokes are of straight grain maple



PAPER-THIN, black lamb skin covers seat and top boot Brass wire windshield frame was slotted to receive glass. Note tiny speedometer

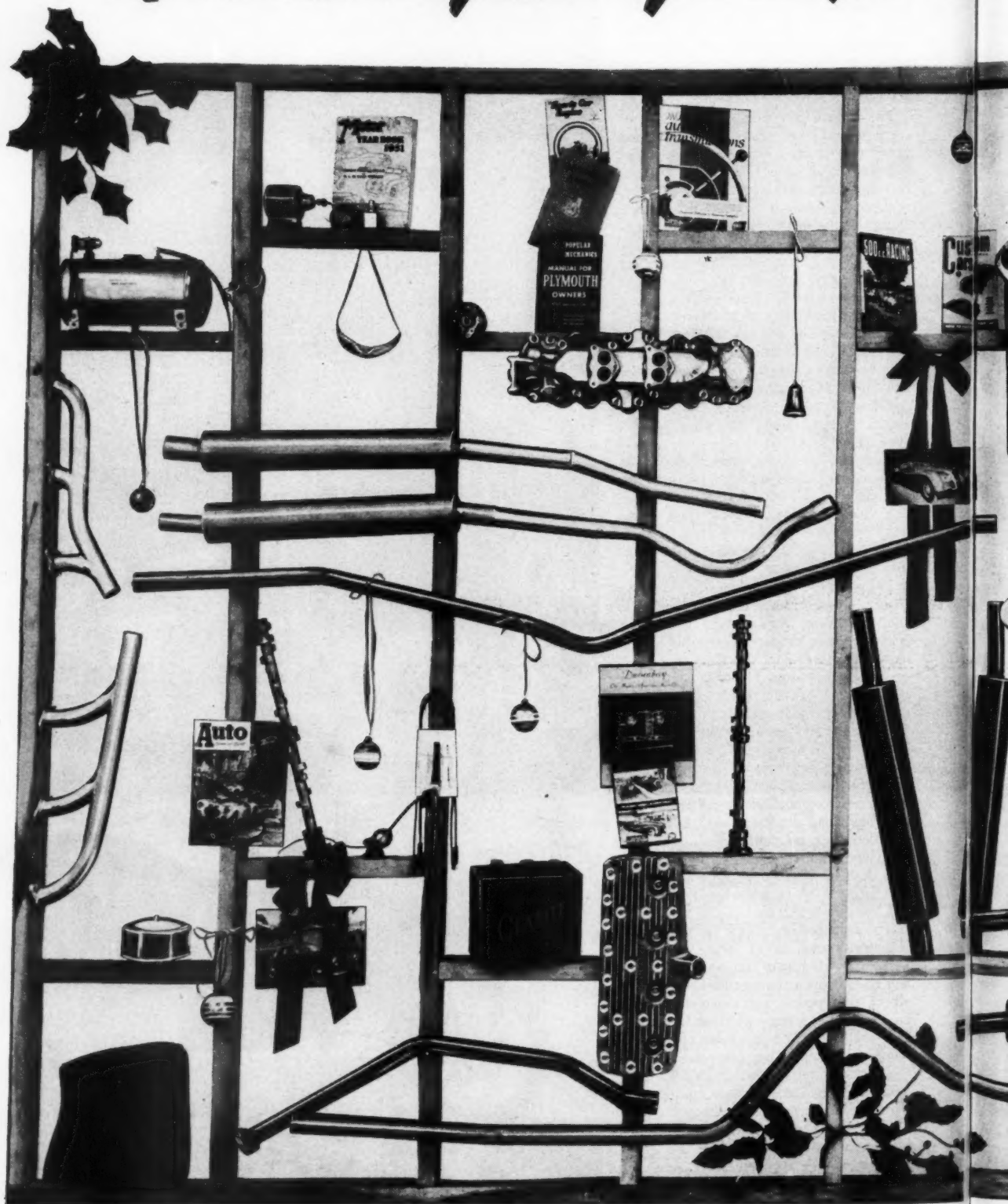


TOOL BOX and tank were fabricated of .010 sheet brass, using special machine built by Zimmerman. Tires were whittled from neoprene

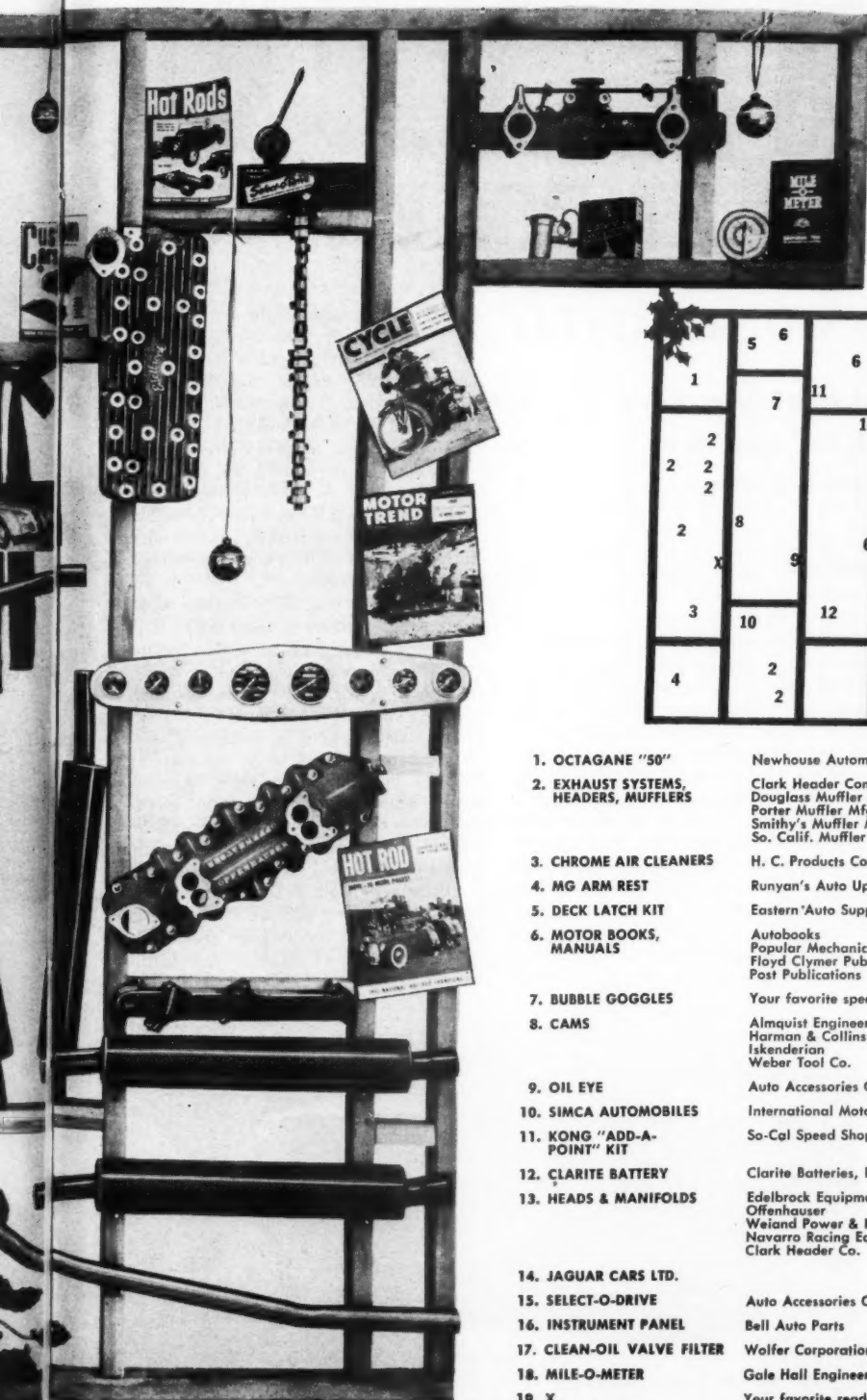


LAMPS, ACETYLENE generator, horn were whittled from solid brass. Horn bulb tube is a piece of stainless-steel-wound guitar string, dash oil lamps have bevel glass, adjustable wicks

Kris Kringle's Garage

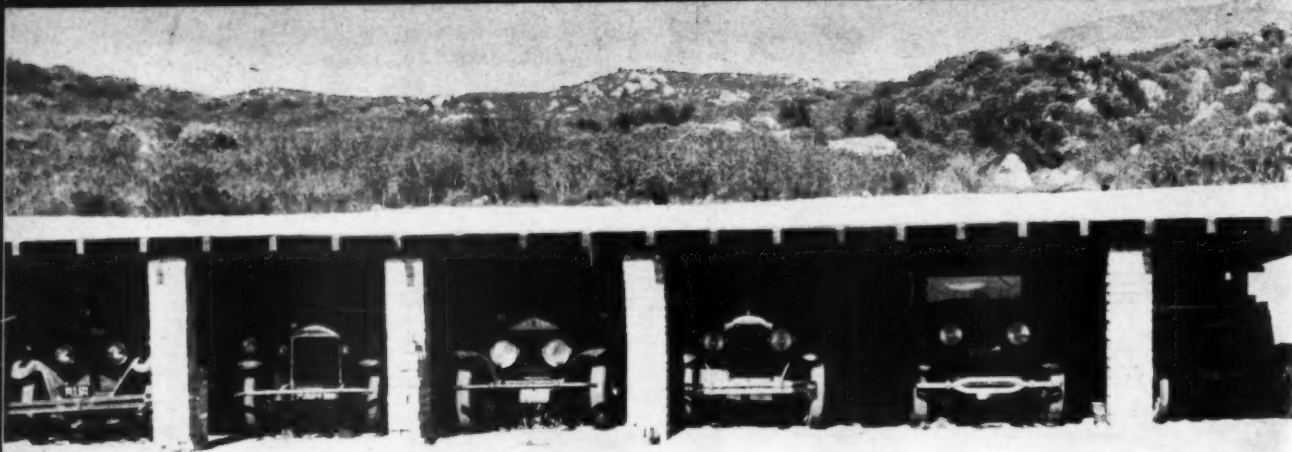


(and where to find his little helpers)



	5	6		6		X	16	14	
1		7	11		6	X	14	8	18
2	2		14		15		X		19
2	2								
2	8		9	6	8		17		
X									
3	10	12			2	2	14	X	
							2		
4	2								
	2						2		

1. OCTAGANE "50" Newhouse Automotive Industries 5805 E. Beverly Blvd., LA
2. EXHAUST SYSTEMS, HEADERS, MUFFLERS Clark Header Company 7018 Firestone, Downey
Douglass Muffler Mfg. Co. 1916 W. Valley Blvd., Alhambra
Porter Muffler Mfg. Co. 11820 W. Olympic Blvd., LA
Smithy's Muffler Mfg. Co. 1716 Naud Street, LA
So. Calif. Muffler Co. 11039 Washington, Culver City
3. CHROME AIR CLEANERS H. C. Products Co. 1702 S. Flower St., LA
4. MG ARM REST Runyan's Auto Upholstery 7966 Santa Monica Blvd., LA
Eastern Auto Supply 3319 S. Grand, LA
5. DECK LATCH KIT Autobooks Box 409, North Hollywood
Popular Mechanics Press 200 E. Ontario St., Chicago
Floyd Clymer Publications 1268 S. Alvarado St., LA
Post Publications Box 926, Arcadia, Calif.
6. MOTOR BOOKS, MANUALS Your favorite speed dealers
7. BUBBLE GOGGLES Almqvist Engineering Co. Milford, Pennsylvania
Harman & Collins 5552 Alhambra Ave., LA
Iskenderian 6338 W. Slauson, Culver City
Weber Tool Co. 4200 Whiteside, LA
8. CAMS Auto Accessories Co. 127 W. Washington Blvd., LA
9. OIL EYE International Motors Ltd. 5670 Sunset, Hollywood
10. SIMCA AUTOMOBILES So-Cal Speed Shop 1104 S. Victory, Burbank
11. KONG "ADD-A-POINT" KIT Clarite Batteries, Inc. 2765 E. Florence, Huntington Park
12. CLARITE BATTERY Edelbrock Equipment Co. 4921 W. Jefferson, LA
Offenhauer 5054 Alhambra Ave., LA
Weiland Power & Racing Equip. 2733 San Fernando Road, LA
Navarro Racing Equipment 5142 San Fernando Road, Glendale
Clark Header Co. 7018 E. Firestone, Downey
13. HEADS & MANIFOLDS
14. JAGUAR CARS LTD. Auto Accessories Co. 127 W. Washington Blvd., LA
15. SELECT-O-DRIVE Bell Auto Parts 3633 E. Gage Ave., Bell
16. INSTRUMENT PANEL Wolfer Corporation 3723 Wilshire Blvd., LA
17. CLEAN-OIL VALVE FILTER Gale Hall Engineering 107 Northampton St., Boston
18. MILE-O-METER Your favorite reading (we hope)
19. X



THE LINE-UP: One wing of the garage holds (left to right) Mercedes, Pierce-Arrow, Rolls-Royce, Packard, Lincoln, Ford

Classic Comments LINCOLNS UNLIMITED

Ralph Thomas is cultivating a rare crop of V-8s, KAs, KBs, and Ks on his 3500-acre desert duchy

by Eugene Jaderquist

THERE IS ONE famous collector who can't stand classic cars with small wheels. Another goes into ecstasies over hammered-silver hardware and a third is an upholstery fan. Then there are the boys who don't think any car is worth the babbitt in its bearings unless the hood is louvered on top and strapped in position.

It is refreshing, in the midst of eccentricity, to find a classic enthusiast who collects because he likes to drive the cars he owns. Such a one is Ralph Thomas. He keeps 23 Lincolns on his 3500-acre ranch near Hemet, Calif. and he has driven every one of them. They're not kept under glass in a hermetically sealed garage, either—they take their chances in open-front stalls and most of them are ready to go whenever Thomas decides to install a battery and add fuel.

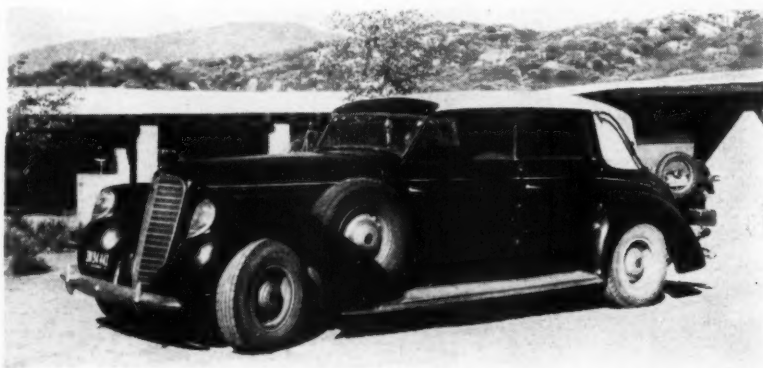
There are other cars, too—three Packards, two Pierce-Arrows, two Rolls-Royces, one Cadillac, one Hupmobile, one Franklin, a Mercedes-Benz, and a model T Ford—but their owner prefers the Lincolns. The beginning of this love affair with the Leland-designed Ford-made classics dates clear back to 1925 and a flawless '23 phaeton that Thomas bought. He'd tried all the other makes, owned many of them, but was never satisfied until he took the '23 phaeton for a trial cruise around the block. As he tells it now, he knew the car was for him when he turned the first corner. He bought it and

drove it for over 150,000 miles, converted it into a camp car and logged another 50,000 miles with the heavier body, converted it further to a speedster. At this point he sold it to an unappreciative buyer and subsequently bought it back. By now the Lincoln should have been tired. Far from it. Thomas broke it up for parts, but left the engine intact and ran a power saw with it for years.

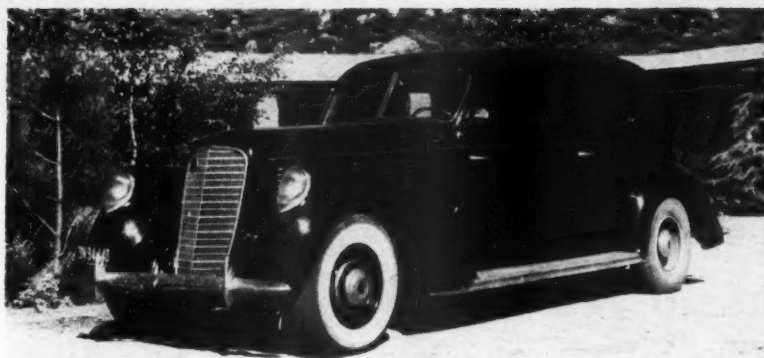
Some of the other Lincolns have racked up amazing records too. The '37 LeBaron convertible sedan has been put through 250,000 miles of rugged usage and is still ready to go. Right now it's getting its

second rebores and its third set of rings, but the crankshaft is almost as good as new and the body, though a long-wheel-base convertible without the rigidity of hard-top models, is still tight and quiet. Then there is the '32 V-8 that has been transformed into a utility tractor for heavy work on the ranch. And there are two others, a '31 Dietrich convertible sedan and a '32 KB five-passenger sedan, that have been converted into heavy duty trucks and used to haul concrete, lumber and heavy appliances.

Lest the more excitable collectors jump to erroneous conclusions, those bodies that have been chopped off to make way for utility wagons were in such poor condition that they could not be restored. Thomas knows the value of a custom body as well as any other enthusiast. Better, perhaps, because he is an amateur body builder in his own right. Without outside assistance, he has made one speedster body, the two truck bodies and the tractor, two camp cars, and one fantastic creation that he and his wife have dubbed "Midsummer Night's Dream." It is a blimp-like body clamped to a '36 Lincoln frame. Its builder regards it with a mixture of surprise and loath-



'37 BRUNN LANDAU has not yet been nicknamed



BLACK MARIA, a '39 Judkins five-passenger sedan is one of the latest, cleanest cars in the Thomas collection. Made for luxury without bulkiness, car has partition and opera seat

ing today. He keeps it covered with a canvas even though there are no prying eyes in the desert foothills above Hemet.

The road from the highway into the ranchhouse is a good five miles in length. Actually it is a five-mile test strip for suspension systems. Thomas cut the route with a middleweight bulldozer which he learned to operate by simply sliding into the seat, releasing the brakes and applying power to the tracks. All the grading has been done with a rough hand and there are several spots where a jeep finds itself almost sliding off the trail on reverse-banked curves. Over this road go the Lincolns and every other car in the collection. If they don't pass the test they're retired to inactivity. Sole exception is the Lincoln Continental which is Mrs. Thomas' car, and is, incidentally, the most recent Lincoln in the collection. It bottoms on soft springs at every major obstacle, so it is kept principally for town use.

All these cars were bought as used cars—most of them since 1946. Price is a major factor with Thomas because he is dealing in quantity and serviceability rather than appearance. He would rather pick up a solid but dirty classic reasonably than a completely restored job for five times the price. For well over two-thirds of his collection, he paid less than \$200 per car. Some of them were ac-

quired for as little as \$65. Only a few—the Continental, of course, the '37 LeBaron convertible sedan, a '39 Judkins five-passenger sedan—cost as much as \$1000. Thomas estimates that he has \$10,000 invested in his fleet. If all had been bought new, the total price would have been approximately \$150,000.

Perhaps the most essential part of Thomas' makeup is his mechanical ability. The knottiest problems of Mercedes, Rolls-Royce and Lincoln engines are solved in the single-stall workshop on the ranch. Heavy jobs, like reborings, are farmed out to a machine shop, but everything else is done right at home. Once, when there was a lull between Lincolns, Thomas tore down the bulldozer and rebuilt it completely. In the past few years he has also built four houses, doing all his own concrete work and carpentry without outside help.

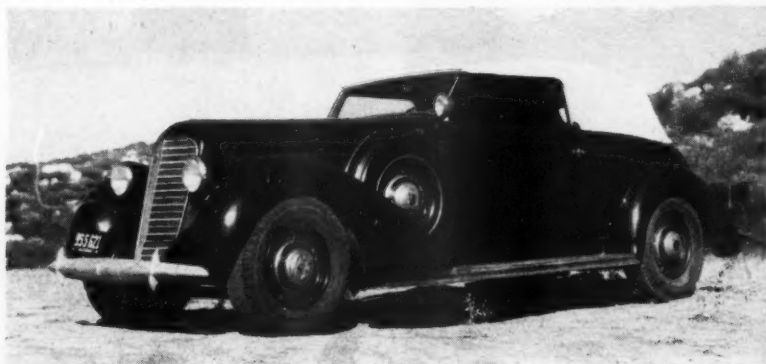
It is fascinating to note the changes that took place in the Lincolns of the '30s. Stylists introduced the V-shaped grille in 1932, then followed up this stunning advance in 1933 by pushing the lower part of the grille slightly outward. For the next six years, the grille progressed slowly in this direction until it resembled a cowcatcher. Hood louvers were changed from vertical to horizontal; fenders grew demure skirts; headlights were swallowed up in the fenders; wheels shrank in size

and lost their wire spokes. In general, the body became more rounded and the overhang grew, especially in the rear. Whether these were changes for the better or not is one of the hottest points of controversy among classic fans.

Just why Thomas collects Lincolns rather than Cadillacs or Packards or Chryslers or any one of the other respected marques is strictly a matter of personal preference. A few other fans wouldn't trade a used yo-yo for the best KB ever assembled. Actually, Lincoln was no better and no worse than the other American compromise classics. The same body builders worked on all the major chassis, save Cadillac, of that period. The engines were all about the same size and of comparable design. None of them were any good at all as far as gasoline economy was concerned and only a rare few (Pierce-Arrow's Silver Arrow) were capable of attacking stock-car speed records. But that low-speed torque was terrific . . . You could idle a good Lincoln down to two miles per hour in high, floorboard the accelerator and move right out. The Packard 12 could be started in high gear from a standing stop. And behold the endurance . . . that 250,000-mile LeBaron is not an unusual Lincoln.

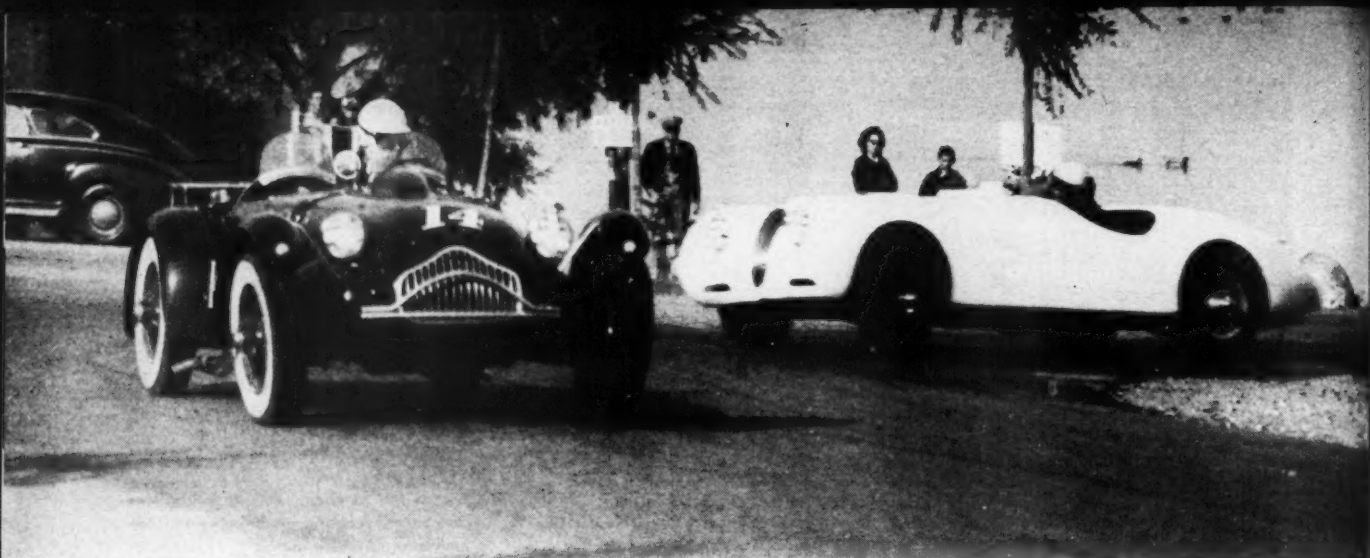
While most of the cars in the collection are in excellent mechanical condition, few of them are in perfect shape as far as body and chrome are concerned. They're all *sound*, but it would require a vast investment to do the repainting and re-chroming and the re-upholstering that is necessary. As far as Thomas is concerned there isn't much reason to restore the exteriors. Most of his cars are located so far from the eyes of critics and purists that he can handle them as he pleases. He gets most of his enjoyment from driving them and working on them—he's more than willing to leave the careful, painstaking restoration to other enthusiasts.

RALPH THOMAS peers into the innards of Old Faithful, the '37 LeBaron convertible sedan that has covered 250,000 miles. In his home workshop, owner has done all own mechanical work



THIS '37 Brunn five-passenger coupe is one of the handsomest cars in Thomas' collection
January 1952





SPORTING SCENE . . .

THE WINNER, Bill Pollack, brings his sparkling, sweet-running Cad-Allard out of the 160-degree, reverse camber Virginia Lake corner, on way to main Reno race victory. Phil Hill, driving modified XK, brings up rear

CAD-ALLARD TRIUMPHS IN RENO ROAD RACE

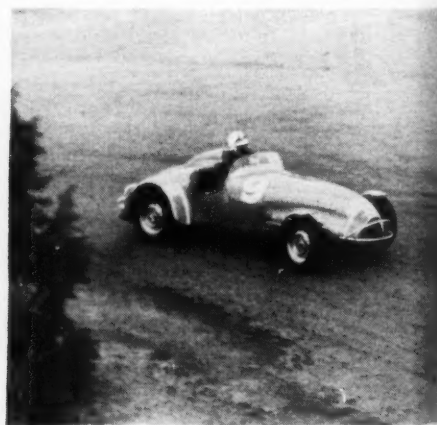
Second, Third Places Won by XK120, Edwards Sports



TIGHT TRAFFIC in one of Reno circuit's many right-angle corners is led by the MG TC special of Al Coppel Jr. in Virginia Lake Handicap Race

WITHOUT A DOUBT one of the best road races ever presented on the west coast, particularly as far as crowd control is concerned, was the Reno Road Race, held on October 21. Not only did the drivers enjoy the challenge of the picturesque 12-turn, 2.5-mile course, but the spectators went away from the day's affair pleased with the entire proceedings.

Each of the three events had its interesting moments. The first race, the Virginia Lake Handicap for novice drivers, was started with the larger displacement cars in the rear and the smaller cars up front. They were released in groups at time intervals, with the Morris Minor



RENO ROAD RACE RESULTS

VIRGINIA LAKE HANDICAP

(Novice Class handicap—Six laps, 15 miles)

1. Tom Carstens (Cad-Allard)
2. Max Balchowski (Jaguar XK-120)
3. Forest Edwards (MG-TC, blown)
4. Thomas Hall (MG-TC)
5. Mac Fraser (MG-TC)

Time—18:42.74

COMSTOCK CUP

(Unmodified cars of 1500cc or less, including TC and TD model MGs, but not MK IIs—15 laps, 37½ miles)

1. Bill Kerrigan (Singer 1500)
2. Ed Oliver (MG-TD)
3. Bob Zeiph (MG-TD)
4. John Fox, Jr. (MG-TD)
5. Edward Fawcett (MG-TC)

Time—30:17.55

NEVADA STATE CUP

(Open SCCA sports cars—50 laps, 125 miles. Stopped at 42 laps)

1. Bill Pollack (Cad-Allard)
2. Don Parkinson (XK-120)
3. Sterling Edwards (Edwards Special)
4. Roger Barlow (Simca Sport)
5. Bill Stroppe (MG-TC V8-60)

Winners by Classes

Class 1—Pollack (Cad-Allard); Class 3—Parkinson (XK-120), McAfee (XK-120), Barrows (XK-120); Class 4—Edwards (Edwards Special), Stroppe (MG-TC V8-60), Escherick (Type 328 BMW); Class 5—Edwards (MG-TC blown), Bourgeois (MG-TC blown); Class 6—Barlow (Simca Sport), Von Neumann (MG-TC modified); Class 7—Cox (Morris Minor Special); Class 8—Devin (Crosley Hot Shot)

Special leading the parade. The handicap however, was insufficient to prevent Tom Carstens, owner of the sleek, black Cad-Allard, from moving through traffic to first spot.

In the Comstock Cup, a 500 cc Cooper, driven by Russ Kelly in its initial west coast appearance, stole the show at the outset from the modified TC and TD MGs, getting off to an early lead and breezing home the winner although it participated in the race for exhibition only. Up to the last lap, Ed Oliver, out for the first time in his TD MG, managed to stay ahead of Bill Kerrigan (Singer 1500). In the last lap the Singer squeezed by to capture first place in a thrilling finish.

A hard duel was fought in the Nevada State Cup between Bill Pollack (Cad-Allard) and Phil Hill (XK-120). Coming out of the turns the Cad-Allard appeared to have more acceleration but the Jag

(Continued on page sixty-two)

SECOND PLACE went to car No. 5, Don Parkinson's XK-120 special. No. 9 is handsome, unrecognizable MG TD special owned by Bill David



January 1952

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OVERSEAS NEWSLETTER — BY A. DEVEREUX

ECONOMICS AND ECONOMY: There's been much furrowing of British brows since the recent news that German cars are becoming more and more a competitive threat in the continental export markets. Exports are the one great hope of Britain's squeezed and struggling economy, and reports that sales of German cars are far outstripping those of English makes in Belgium and Switzerland have an ominous ring to the thoughtful Briton. But austerity is the common denominator of almost all European economic life, and British cars simply don't compete in price with the German product. English manufacturers can't cut prices without cutting into the already meager take-home pay of their workers, and for some difficult-to-fathom reason not one of them mass-produces a car that is, by continental standards, really cheap to make.

Berlin's recent Auto Show could have given Britain a clue to the sort of car that can be sold in quantity to European buyers. For example, there was the Gutbrod, a 600 cc (36.6 cu. in.), two-stroke-engine car offered in a coupe or a two-seater sports body; the Champion, a 398 cc (24.3 cu. in.), two-stroke coupe; and the tiny, practical Volkswagens, DKWs, et al. Cars like these are cheap to produce, cheap to buy, cheap to maintain.

GERMANY: Newest addition to the rash of records being run off this year on France's well-worn and well-banked Montlhéry track is a group of 19 world marks set by a tiny German *bolide*. The records set were in the FIM's (International Motorcycle Federation) Class "B," for three-wheeled vehicles of 500-750 cc displacement. The car was a Goliath lightweight, enveloped in a body that is sim-

ply a slender flying wedge. The engine is a 750 cc (46 cu. in.) two-stroke twin, which also powers Goliath's incredibly economical (see above) passenger cars. The new records range from 96 mph for two hours to an amazing average of better than 84 mph for a solid 24 hours—staggering performance from minute displacement!

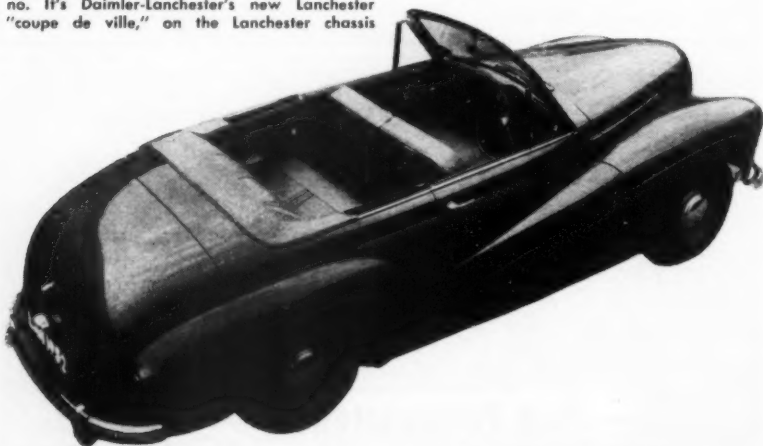
FOR MODEL-CAR FANS there's a new book, "Racing Cars in Miniature"; publisher's address on request. . . . And there's new inspiration: a recent *Bugattics* (publication of the Bugatti Owners' Club) reports that one enthusiast, who has built an entirely accurate, entirely workable Type 51 Bugatti model, is now making a four-cylinder, four-stroke twin-overhead-camshaft engine—with blower. Displacement? 10 cc—three-fifths of a cubic inch!

ITALY: A new Alfa-Romeo model with sports-car performance is currently being exported to the U.S., should cause much yearning in the foreign car buyer's breast. The sleek coupe body pictured here encloses a 1.9 liter (116 cu. in.), 8:1 compression ratio, dual overhead camshaft engine equipped with twin Weber carburetors, and is capable of 113 mph. . . . There've been many words spoken and written concerning the influence of Italian designers on new American cars. Man bites dog in this item: a new Boneschi (Milan) body for a Fiat 1400 features an almost-identical-to-Nash grille, modified Cadillac fins. . . . And absolute winner of the famous annual concours d'elegance of the Automobile Club of Rimini was a '51 Cadillac; Caddies also took many honors at the latest Monte Carlo *concours*. . . . Fiat's latest is a very Jeep-esque "utility" car,

the Campagnola ("country girl"). It's powered by the Fiat 1400 engine, the stroke of which has been increased to give 1900 cc (116 cu. ins.). The engine is tilted and mounted against the right-hand frame rail, permitting drive shafts to meet both front and rear axles at their centers. The gear box has four speeds, and a two-speed transfer box provides for front-wheel drive.

ENGLAND: This year's Targa Florio win by a Le Mans Replica Frazer-Nash (driven by Franco Cortese, owned by MOTOR TREND correspondent Count Johnny Lurani) was the first victory for a British car in the history of the classic race, and probably was the inspiration for the latest change in the Frazer-Nash line: all of '52's models will be built on the Le Mans chassis. In addition to the familiar Le Mans and Mille Miglia models there'll be a new Frazer-Nash this year, a fast two-seater convertible designed primarily for touring, secondarily for competition, and powered by an 80 bhp Bristol engine with a 125 h.p. unit available for high performance. The Bristol engine is essentially the same power unit that brought road racing fame to the Type 328 BMW. It's interesting that the convertible, heaviest of the three models, packs the vivid power: weight ratio of 1:15.8, when equipped with the 125 bhp engine. This figure becomes 1:12.2 in the classic Mille Miglia car, 1:14.0 in the Le Mans replica. All the models are equipped with oil radiators and one-shot chassis lubrication systems. Frazer-Nash has recently experimented with harmonica-type grilles, but these have been discarded. Standard now on all models will be a vintage-radiator-shaped grille inspired by FN's illustrious chain-drive ancestors. Incidentally, these cars cost a great deal of money. . . . Latest offering of the staid Daimler-Lanchester Co. is the Lanchester "coupe de ville," and it's a car remarkably reminiscent of many customized American cars, with its shaved nose, fadeaway front fenders, dechroming, and its clean rear deck lines. . . . Another contender for small-displacement records at Montlhéry is the relentlessly-streamlined Cooper pictured here. The car is built to fit 350, 500, and 1100 cc JAP (J. A. Prestwich) engines, has all-round independent suspension, rack and pinion steering, chain drive. The steering wheel is placed horizontally in the tiny cockpit—and so is the driver. . . . A very promising debut was made by Aston Martin's new competition car, the DB3, at the Ulster TT race. A light, two-seater version of the DB2, which is, of course, no mean competition car itself, the DB3 was right

CALIFORNIA CUSTOM? In spite of appearance, no. It's Daimler-Lanchester's new Lanchester "coupe de ville," on the Lanchester chassis



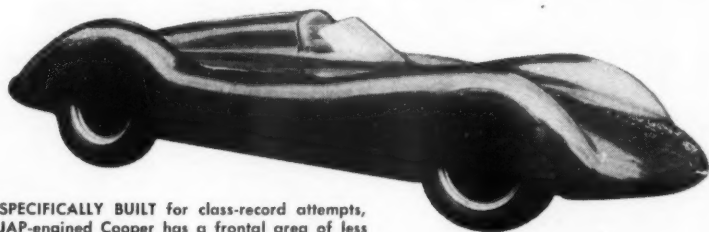
Forty-eight

behind Stirling Moss' winning, 1000 cc-plus displacement Type C Jaguar, and well ahead of other, slower Type Cs, when exhaust trouble took it out of the race. The car has a new tubular chassis, torsion bar front suspension, de Dion rear axle, plus a new five-speed gear box. . . . Following the lead of the American Cunninghams in their swing from Cadillac to Chrysler power, the '52 Allard catalogue lists the Chrysler V-8 engine as stock for their competition two-seater, with Cadillac and Ardun engines available. Other changes for the car this year are split-axle front suspension, and an increase of six ins. in overall length to permit the engine to be mounted further forward, thereby allowing greater leg room for the driver. New for the Allard line is a convertible coupe version of the current sedan model.

First there was last year's Ford Consul, then the new Ford Zephyr—and now it's Vauxhall whose latest models



U.S. ENTHUSIASTS will welcome this new, fast Alfa-Romeo, now being sold here. Acceleration is said to be excellent, top speed 113 mph. Car is also available with Farina convertible body



SPECIFICALLY BUILT for class-record attempts, JAP-engined Cooper has a frontal area of less than $6\frac{1}{2}$ sq. ft. Body is built in two sections



FIRST POSTWAR Bugattis were seen at Paris Auto Salon last fall. As can be clearly seen above, only resemblance to older examples of the marque is in the shape of the radiator grille

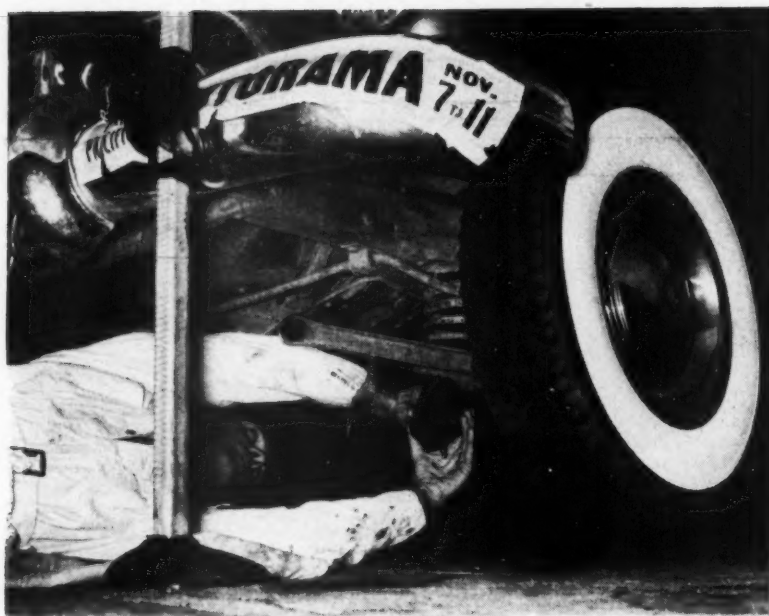
look like neat, scaled-down versions of low-price American cars. This year's Velox and Wyvern models have been lengthened and widened, their engines mounted further forward, and their seats built to run the full width of the car—all these factors making for much increased passenger and luggage space. The frontal air intake is surrounded by much chrome, there are chrome rubbing strips on the flush sides, and there's much more window area than is typical of English cars, allowing far better visibility, but less of the "my car is my castle" kind of privacy. Vauxhall is, as you probably know, owned by General Motors, and it's interesting that that company and English Ford have pioneered the "American look" in England.

BARCELONA FLASH! As we go to press, this is the only information available on the just-run Spanish Pena Rhin Grand Prix at Barcelona, the decisive international Formula I race of the season. Argentina's Juan Manuel Fangio went the full 70 laps (about 275 miles) to win in 2 hrs. 46:56, also to capture the World's Championship.

Argentinian Froilan Gonzales hurled his unblown Ferrari into second spot just one minute behind Fangio, Farina and Ascari following in Alfas, in that order. Significantly, the *London Times* carried not one word regarding the BRM in its post-race story.

Fangio's championship points total 31, Ascari came up next with 25, Gonzales third with 24.

(Continued on page fifty-five)



ACCESSORY TRIALS . . .

AIR LIFT

Now—an "additive" for springs

ROLLIN MACK INTERVIEWS AN EXPERT

Bill Burke is one of California's outstanding hot rodders. Builder and driver of record-holders, advertising manager of Hot Rod Magazine, president of Southern California Timing Association—Bill has a thorough knowledge of how a car should handle. Let him tell it.—Editor

Now then, Mr. Burke—you are going to discuss some very basic problems of motoring, as I understand it.

Basically.

Such considerations as?

The banging bottom, the vibrating vertebra and the serpentine swivel.

A follies routine, eh?

Well, let's say it's strictly folly to live with them when you can rise above them.

And how do you do that?

Easy—the solution is air!

Take off, Gypsy Rose.

I learned about Air Lift on my recent trip to Bonneville. There I was—carrying two passengers, four spares, a half dozen batteries and Ray Brown's machine shop in the car, and towing my competition

job on a two-wheeled trailer behind. That's a lot of extra weight for the Olds—about 3000 pounds worth.

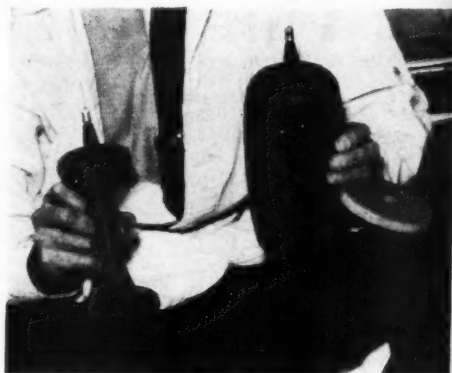
None of us particularly relished the prospects of that drive. We've made a lot of them to the Lakes and to Bonneville itself. You never get to relax—always on guard against dips, curves, rough stretches, the sudden and unpredictable whip of all that weight behind you, extra concern for the yo-yos in traffic. A lot of the driving tension comes from not feeling quite sure of your car. You see, most passenger cars have too soft springing—and when you overload you get a rear-end sag that gives you the pleasant sensation of piloting a box car. Your headlight beams go kiting up in the air. You keep wondering if all four wheels are on the ground at the same time. The first dip and you bottom with a spine-jarring smack; the first curve you get into a little fast takes all the fun out of the trip as the nose digs in and the back end tries to beat you around the corner; and that good-old-trailer-swivel-action—that should

"To eliminate the vibrating vertebra. . ."

happen only to people who don't live right.

Well, sir, this trip was different. We had Air Lifts in all four springs. That Olds traveled like a cloud—a very solid cloud, of course—all the way. No sag, no bumps, no front end chatter, no dipping or leaning. It was a wonderful ride. Those detour stretches up around Ely, Nevada felt as smooth as main roads. And if the Nevada Chamber of Commerce will pardon me, those detours could have felt a lot worse!

At the Salt Flats, I took the Olds (minus all the impedimenta) through the traps just for kicks. Turned 96 mph for the fastest stock time at the meet—and not bad for a '49 Olds sedan. The car was steady as a rock—no sway, no flutter, no body vibration at the top of the needle.



"... the answer is Air."

You've put the seal of approval on Air Lift performance, Bill—how about telling us something about the unit itself.

The Air Lift is actually a pneumatic spring booster—a cylinder constructed of heavy synthetic (butyl) rubber. It is inserted—very easily and quickly—within the coil spring and then inflated just like a tire. You adjust the pressure to suit the need. For instance, I used around 15 lbs. for that heavy duty stint—now for normal driving without extra weight in the car I carry about 6 lbs. The Olds has never handled better.

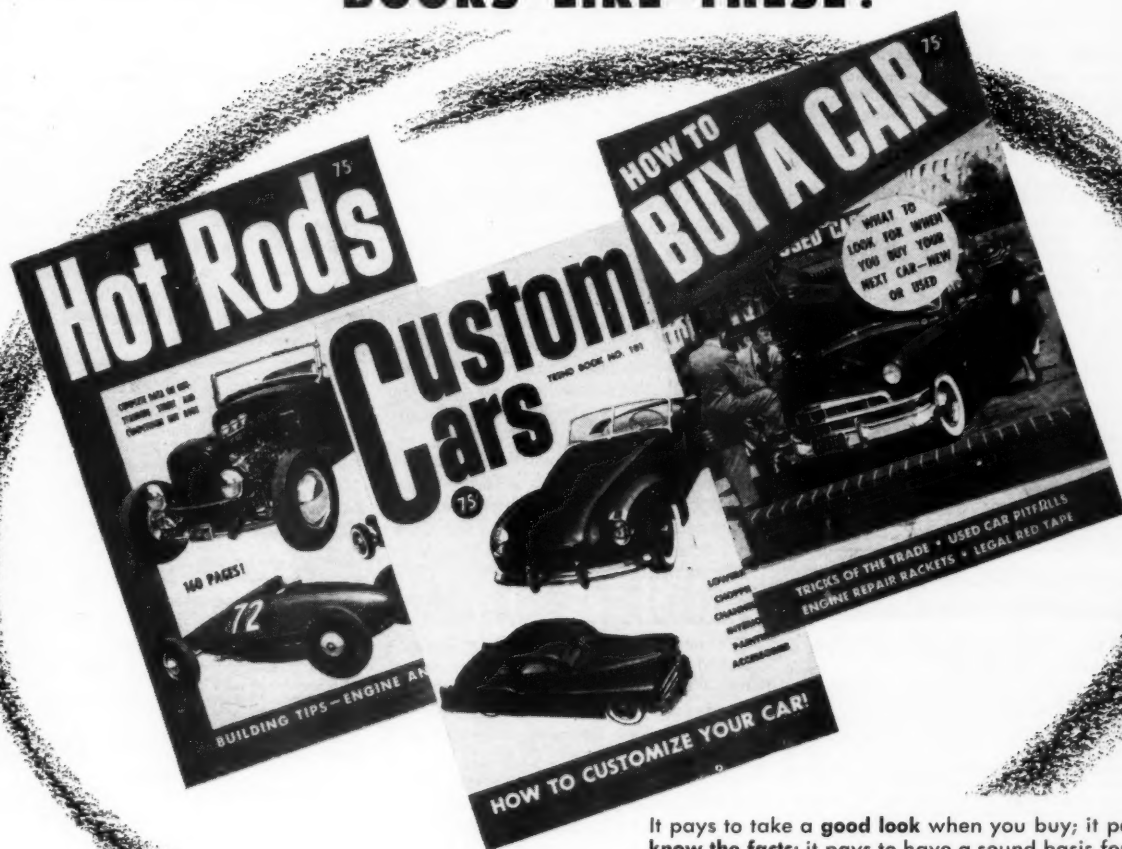
Air Lift is available for nearly all front coil-spring cars, for all models of Buick and Olds with coil-spring rear suspensions; and (in a special adaptor kit) for all cars with leaf type rear springs. You can get the full scoop from Air Lift Company, Lansing, Michigan.

—Rollin Mack

Motor Trend

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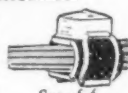
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AUTOBOOKS

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Olds Motor Trials

(Continued from page thirty-nine)

Having loads of speed on instant tap is secondary to having brakes when you need them. These factors, along with general roadability, are the motorist's best friends. Old's brakes are fine, and, never once, even during the severest tests, did they show any trace of fade. We were surprised to find that, while stopping distances at low speeds were not notably good, those at 60 mph were excellent. Moreover, the wheels showed little tendency to lock during crash stops and the car held an unusually straight course. There was none of the rear axle bounce which frequently occurs during hard braking on Hotchkiss-drive-equipped machines. For sustained efficiency and, above all, for the degree of control they offer the driver, Oldsmobile brakes deserve a high rating.

An Engine of Proved Quality

Extensive comment on the now thoroughly famous Rocket engine is superfluous at this late date. Since its appearance in '49, it has been described and discussed throughout the popular automotive field and its salient features and performance characteristics were covered in detail in the already-mentioned '50 Olds Motor Trial. However, one point not generally noted which immediately attracted Bodley's attention is the fine accessibility of all parts of the engine for servicing. Even if you don't work on your own car, this is of importance to you: it means that work on the power unit can be accomplished with minimum expenditure of time—thus lower upkeep costs. Major tune up for the '48, in-line Olds took 2.2 hours; the same job takes only 1.3 hours on the V-8 engine.

Of the Rocket engine's 135 bhp, 92 hp actually reaches the driving wheels, according to the Clayton chassis dynamometer. This high percentage of output at the wheels is matched by only one other of the '51 cars we have tested and is an important factor in determining the Olds' good acceleration and fuel economy.

Improved Transmission

Our test car's Hydra-Matic was a much smoother-operating, more quiet installation than the one tested last year. Ease of uphill operation was good, a smooth getaway from dead stop being a cinch, even on a 34 per cent grade. If you prefer an automatic transmission in your car, this is a good one.

Gaudy but Good

Naturally, the Super 88 offers all the comforts and all the lures of the smartly designed modern car. Interior appointments are satisfying and good, body work is neat and quite well finished. Though the external medallions, ornaments, and

chrome bric-a-brac are certain to offend the admirer of thoroughly purposeful design, they can be removed at little cost. Of course, if the buyer appreciates extensive trim on a car, the Olds is really tailored for him.

In any case, this is an automobile with generous space rations in all directions, smart looks, a nice finish. The outer envelope houses a frame, power unit, and running gear of real engineering distinction. It all adds up to an automotive investment which has few equals in the world today.

Terrific TT Number

This figure, which rates our test cars as *investments*, taking into account purchase price, upkeep, repairs, replacements, and depreciation, turns out to be far lower for the Super 88 than for any other car tested in this price class. It's even better than many cars two price classes lower down. Good gas mileage, low depreciation, ease of maintenance account for Olds excellent rating. The Super 88 Trend Trials Number is 30.3.

TABLE OF PERFORMANCE

CLAYTON DYNAMOMETER TEST			
1200 rpm (full load)	20 mph	45 road hp	
2000 rpm (full load)	33 mph	80 road hp	
3200 rpm (full load)	55 mph	(max.) 92 road hp	
ACCELERATION TRIALS (SECONDS)			
	Low	Drive	
Standing start 1/4 mile	21.13	21.57	
0-30 mph	5.25	6.24	
0-60 mph	15.75	16.82	
10-60 mph	—	15.40	
30-60 mph	—	10.97	
*No advantage from use of Low Range.			
TOP SPEED (MPH)			
Fastest one-way run*		101.88	
Average of four runs		92.54	
*Approximately 30 mph tail wind.			
FUEL CONSUMPTION (MPG)			
At a steady 30 mph		22.6	
At a steady 45 mph		21.5	
At a steady 60 mph		16.8	
Through light traffic		18.4	
Through medium traffic		14.4	
Through heavy traffic		11.1	
BRAKE CHECK			
Stopping distance at 30 mph		41 ft. 2 ins.	
Stopping distance at 45 mph		99 ft. 11 ins.	
Stopping distance at 60 mph		190 ft. 6 ins.	
SPEEDOMETER CHECK			
At 30 mph indicated 35 mph		16.6% error	
At 45 mph indicated 51 mph		13.3% error	
At 60 mph indicated 67 mph		11.7% error	

GENERAL SPECIFICATIONS

ENGINE		Pushrod ohv V-8
Type		3 1/4 x 3 1/8 ins.
Bore and stroke		0.92:1
Stroke/bore ratio		303.73
Cubic inch displacement		135 @ 3600 rpm
Maximum bhp		145
Bhp/cu. in.		263 lbs.-ft. @ 1800 rpm
Maximum torque		7.5:1
Compression ratio		
DRIVE SYSTEM		
Hydra-Matic 4-speed transmission, no clutch pedal.		
Ratios:	First—3.82	Second—2.63
	Third—1.45	Fourth—1.00
		Reverse—4.30
Rear axle: Semi-floating, Hotchkiss drive, hypoid bevel gears, ratio 3.64, 3.90 optional.		
MISCELLANEOUS		
Wheelbase		120 ins.
Overall length		204 ins.
Overall height	63.6 ins. (5-passenger load)	
Overall width		75.7 ins.
Tread	Front 57 ins., rear 59 ins.	
Tread/wheelbase ratio		1:2.07
Turns, lock to lock		4 1/4
Weight (test car)		4010 lbs.
Weight/bhp ratio		29.7:1
Weight/road hp ratio		43.7:1
Weight distribution (front to rear)		55/45

Cunningham

(Continued from page thirty-nine)

ready is in progress on the first car. At the moment, for obvious reasons, the men responsible for it haven't too much to say, though Phil Walters disclosed this much: The new car will be scaled down to about three-quarters the size of the C2 and will probably have the same general outline. Chrysler power is to be retained, and certain modifications to the racing version indicate the possibility of 300 bhp at peak rpm. Weight, it is hoped, will come down by about 1000 lbs.; even bigger and more powerful brakes will be used and a Ferrari-type five-speed gearbox will be available as a standard feature. Estimated maximum speeds are 135 mph for the production model and 175 mph for the competition job.

Equally important, there is a good chance that the starting price may be pared down to around \$8500, depending on how well production gets into stride.

The Cunningham has not already "arrived" as the ultimate in sports cars. Its manufacturers are the first to admit that much has yet to be done, particularly by way of improving the power-weight ratio; but when the new C3 model goes into production in the very near future, it will come within measurable distance of the ideal all-around sports car.

GENERAL SPECIFICATIONS

ENGINE	
Type	pushrod ohv 90° V-8
Bore and stroke	3 13/16 x 3 5/8 ins.
Stroke bore ratio	0.95:1
Displacement	331.1 cu. ins.
Maximum bhp	270 at 5500 rpm
Bhp/cu. in.	.816
Max. torque	360 lbs.-ft. at 1800 rpm
Compression ratio (optional)	7.5 or 8.6:1
DRIVE SYSTEM	
Synchromesh three-speed transmission	
Ratios:	First—2.8 Second—1.5 Third—direct Reverse—3.0
Rear axle:	full de Dion with inboard brake drums.
Hatchkiss drive:	Spiral bevel gears, 3.54:1
DIMENSIONS	
Wheelbase	105 ins.
Overall length	194 ins.
Overall height (excluding windshield)	39 ins.
Overall width	70 ins.
Tread, front and rear	58 ins.
Turns, lock to lock	2 3/4
Weight (test car)	3450 lbs.
Weight/bhp ratio	12.8:1
Weight/road hp ratio	21.6:1
Weight distribution (front to rear)	53/47%

TABLE OF PERFORMANCE

1200 rpm (full load)	31 mph	56 road hp
2000 rpm (full load)	52 mph	108 road hp
3100 rpm (full load)	82 mph	160 road hp

ACCELERATION TRIALS (SECONDS)

Standing start 1/4 mile	17.10
0-30 mph	3.30
0-60 mph	6.30
10-60 mph	5.40
30-60 mph (low)	3.50
30-60 mph (2nd)	5.70
30-60 mph (high)	6.50

TOP SPEED (MPH)

Fastest one-way run possible (4500 rpm)	124
Maximum Le Mans speed trap (5500 rpm)	152

FUEL CONSUMPTION (MPG)

At a steady 60 mph	19
--------------------	----

BRAKE CHECK

Stopping distance at 30 mph	27 ft. 6 ins.
Stopping distance at 45 mph	64 ft. 4 ins.
Stopping distance at 60 mph	134 ft. 7 ins.

SPEEDOMETER TEST

No speedometer. Rpm read off against calibration chart. Checked against dynamometer up to 82 mph. No measurable error.



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MOTOR TREND

1949—1951

CLASSIC CARS

Bugatti (Cars of Character)

Buying a Classic Car

Classic vs. Restyled

Cord

Custom Bodies (1930-1935)

Custom Bodies (1935-1941)

Duesenberg Series J

Duesenberg Series J

Lincoln (Cars of Character)

Mercedes S

Rolls-Royce Silver Ghost

FEATURE CARS

Allard K-2

Allard ("Tendence Continentale")

BRM

Cadillac, 1949

Connaught

Cummins Diesel

DKW ("Tendence Continentale")

Edwards Sports Car

Fiat 1400 ("Tendence Continentale")

Hvezda (Star)

IT-160

Jaguar XK-120

Meyer-Drake Supercharged Special

Muntz Road Jet

Nash Phantom Corsair

NX

Simca Huit

Small Cars (American)

Three-Quarter Midget

Topper Car

Mar '50

Sep '50

Mar '50

Jul '50

Nov '49

Dec '49

Jan '50

Feb '50

Dec '49

Sep '50

May '50

Jun '50

Dec '49

Jun '50

Nov '49

Nov '50

Dec '50

Oct '50

Jan '50

Aug '50

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May '50

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WHAT'S YOUR IDEA?

NOTE: Want your choice of any ten available back issues of MOTOR TREND, free? Just send in your little-known idea which other motorists might be able to put to use. The idea can apply to any class of car: stock, custom, veteran, antique, or classic. Upon acceptance of your idea, you will be sent a check list of available back issues, from which you can make your selection.

We will do our best to verify the correctness of the ideas which appear on this page, but can accept no responsibility for possible misstatements by readers.

CRISP, HORIZONTAL lines and conservative grille of Luxor are intended to retain the character and give same overall impression as the Lincoln Continental. Designed by W. A. Fetter



KEEP RUBBER HOSES FROM STICKING

Water hoses and small-bore tubing tend to stick to the pipes they're fitted over. To always be sure of easy removal of hoses, wipe a film of glycerine on the pipe before pushing the hose over it. If there's quite a bit of pressure in the line, be sure to get the hose straps good and tight, otherwise the hose may slip off.

Andrew Collins,
Tulsa, Oklahoma

BATTERIES AND THEIR BOXES

Just about every car owner knows that a little grease or vaseline painted on the terminals of his battery will keep sloppy corrosion from forming. Battery boxes are another matter. Acid eats through their paint, if any, and the first thing you know, the battery box itself is covered with rust and fuzzy, white corrosion. Black asphaltum paint cures this once and for all and it looks good, too.

Dave Wheelock,
Tacoma, Wash.

MG INSTRUMENTS AT NIGHT

Enjoyed Dick van Osten's article on the MG Sports Trial very much and agree with him that it is "truly an amazing piece of machinery." One slight objection that he mentioned regarding the hard-to-read instruments may easily be overcome by painting the needles and instruments with luminous paint. A base coat of white paint prior to the luminous paint will make them readable on dark nights without the dash lights on.

V. C. Anderson,
Port Hueneme, Calif.

LOCATING RARE CARS

A method that I've used with fine results for digging up rare old cars and parts is running ads in rural journals. The rates are invariably cheap and there are hundreds of such periodicals all over the nation. I have found the best approach to be the offer of a "\$5 reward for information leading to purchase of....." You'd be amazed at the rare old stuff that's still hidden away in rural areas.

Jules Roderick
Phoenix, Ariz.

KEEP BATTERY AT ¾ CHARGE BECAUSE

A fully-charged battery self-discharges quite rapidly down to the ¾-charged state. From ¾ down, the self-discharge rate is much slower. When charging up a battery, most of the gassing takes place between ¾ full and full, and gassing action tends to mechanically remove active material from the plates.

If a battery normally kept at ¾ full should get more charging than necessary, the extra charging will bring it up to full. But if a battery is normally kept at full, then any extra charging will be over charging and will

- Be wasted electricity
- Cause loss of battery water by electrolytic decomposition
- May cause loss of electrolyte by flooding
- May cause excessive heat
- Definitely cause unnecessary gassing.

Modern cars normally have their voltage regulators set to give five amps overcharge when battery is fully charged! This alone

HOW TIGHT IS TIGHT?

If you do your own work, learn to use a torque wrench! The proper tightening of bolts and nuts often makes the difference between a successful, lasting job and a real failure. For example, a perfect valve grind can be ruined by cinching up too hard on the head nuts, causing the block to distort and ruining the effectiveness of the new valve job.

Stripped threads, broken bolts and studs are other results of over-tightening. The way out is this: as far as I know, every car manufacturer publishes a "bolt and nut tightening specification table." Write for the one that applies to your car, invest in a torque wrench. The table will tell you how tight is tight and the wrench's indicator will tell you when you're just right.

A good deal for owners of L-head engines is to get an old engine head from a wrecking yard, have holes bored in it over the valves and a little larger than the valves. When doing a valve grind, you can tighten this head in place and still grind the valves. By using this method, you grind to fit the block under normal distortion and you're assured of the best possible mating of the valve seats this way.

Ken Pullman,
Cincinnati, Ohio

OVERSEAS NEWSLETTER — — CONTINUED

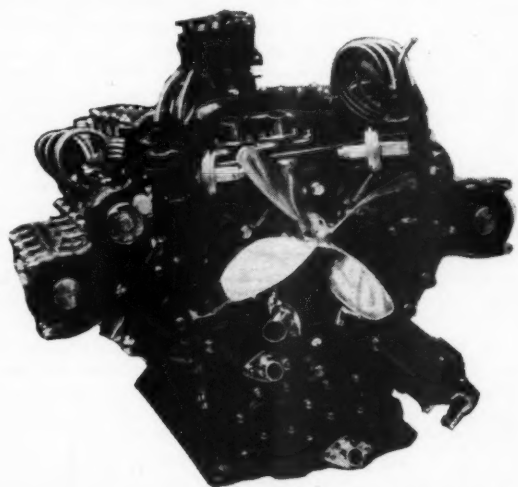
Some Highlights of the Paris Show



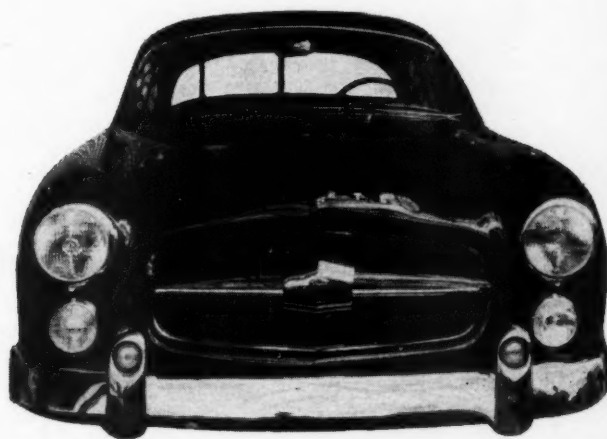
FLASH! FRANAY is bored with the washtub school of design so popular with Italian and American builders . . . hence classic Bentley on his stand



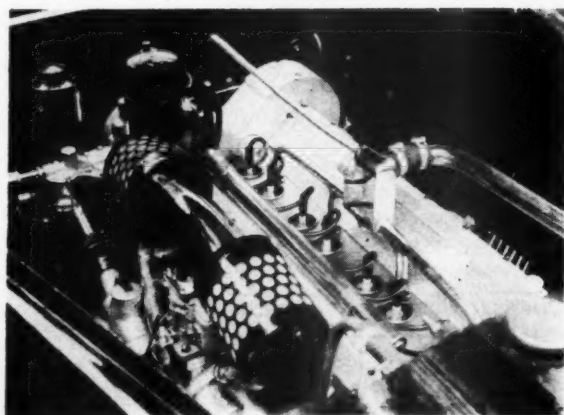
FIAT'S NEWEST was also shown at Paris Salon. It's the "Campagnola" Jeep. It has a 1400 Fiat engine bored out to 116 cu. ins. installed



NEW SPANISH car, the Pegaso, is powered by fantastic V-12, dual overhead camshaft engine (left), designed by an ex-Alfa Romeo engineer



NEW SLANT on French Ford "Comete," described in December's MOTOR TREND. Coachwork is by Facel-Metallon on Ford Vedette V-8 chassis



POWER PLANT of the new Bugattis is essentially a Type 57 engine with downdraft carb, no blower. Displacement is 201 cu. ins. (3.3 liters)

SPOTLIGHT ON DETROIT

-as we go to press . . .

(Continued from page ten)

next four months, with the last models being unveiled in March. Although the bulk of the new versions will be face-lifted jobs, as indicated by current announcements, you should still look for a number of unusual developments.

At least one of the big three will have completely restyled and re-engineered cars to offer. Among the independents, Nash is rumored as having major body and styling changes, and is said to be the only one in its category with drastically altered models. There will be a number of important engineering developments released during these months. Most anticipated, of course, are the new Dodge and DeSoto V-8s. However, watch Oldsmobile and Cadillac, for they will reveal engine refinements which improve performance and step up bhp.

Production Prospects

Considerably fewer passenger cars will be made this year than in '51. Recent production restrictions call for a cutback of more than 13 per cent during the next three months, leaving an actual output in this period of around one million units.

If the industry is able to maintain such a rate throughout the year, '52 will turn out to be the fifth largest year in more than half a century. Government experts believe this will be sufficient to satisfy essential transportation needs, and the industry hopes to achieve it.

Our highways may be loaded now, but production such as this will add a net of 17 million vehicles in the next decade, according to some Detroit experts. They see a staggering total of 65 million cars and trucks in operation no later than '65. Anybody got any answers on how to break up the potential traffic jam?

GM Demonstrates Sun Motor

Almost simultaneously with this preview of things to come, General Motors unveiled a miniature, working sun motor to Detroiters. Costing \$600 to construct, it is a fist-sized gadget which spins a large wooden disk with only the sun as a motive force. Photoelectric cells convert heat from the sun into electrical energy to set the device in operation. The GM Sun Motor will be shown throughout the country this year as a feature of the Corporation's "Previews of Science" for 1952. John Reedy, show director, says "it may be 100 years before sun-powered automobiles will be on the road, but now the handwriting is on the wall."

New Gasoline Introduced

An independent gasoline refiner in Detroit has placed a new fuel on the local market which offers hope for continued progress in high-compression engine development.

The new gas is known as Platofuel, uses platinum as a catalyst in its manufacturing process. It already carries a 92 octane rating which may be boosted to as high as 98 by simply adding tetraethyl lead. This is a higher rating than is needed by present car engines.

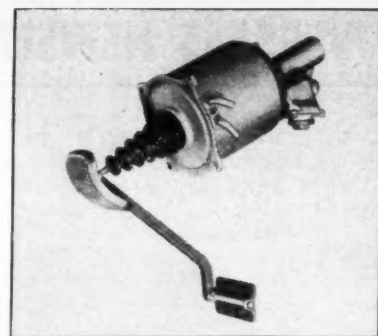
This fuel is causing considerable interest in Detroit auto circles, where it has been introduced by Speedway Petroleum Co. The firm says Platofuel produces more usable BTUs per gallon and burns cleaner than present-day fuels; leaves no residue or gum.

Late Flash on '52 Willys

The '52 Willys is really a new automobile. Its body is completely new, having no resemblance whatever to any previous car this company has built. The engine promises to be interesting, too.

Two lines are contemplated, the Aero Wing, or standard model; and the Aero Ace, or de luxe version. Both cars have plenty of glass area, are 5 feet high and 6 feet wide.

The hood is a drop nose, allowing driver to see both front fenders. From the operator's seat the two rear fenders may also be seen. In appearance the car looks like a customized Ford in front and a customized Henry J in the rear. The latter



HEART OF THE Treadle-Vac layout is this compact vacuum power cylinder with internal control valve, built-in hydraulic master cylinder. Treadle is mounted alongside accelerator pedal.

gains its impression from tail fins which closely resemble the KF low-price car.

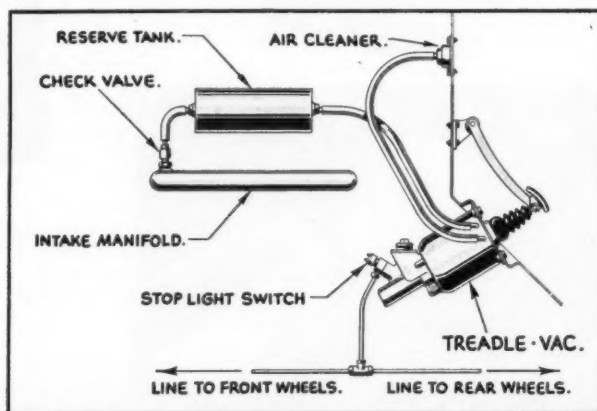
There is a noticeable lack of chrome on the entire car, which is very refreshing. The nose for example, is composed of a simple horizontal chrome bar with the letter "W" in the center. One chrome strip on each side of the body, and some chrome trims round the windows are all that is used elsewhere.

The engine is the Willys "Hurricane." It is a six-cyl. job, developing 90 bhp with a compression ratio of 7.6:1. Standard fuel is used.

Willys claims a top speed of 90 mph. Tests show that it goes through the gears, 0 to 60 mph in 14.4 secs. It is supposed to get 35 miles to a gallon of gasoline with overdrive.

Other bits of information: seats are 61 ins. wide and there is 34 ins. headroom inside. Frame is integral construction with the body and is welded. The standard version has no hood ornament, looks like a bulled-nosed Ford. The de luxe job has an airplane-type hood ornament.

Selling price, not yet established, is expected to be somewhat above the Nash and the Henry J.



PACKARD, PERHAPS several of the GM cars, will be equipped with Bendix' "Treadle-Vac" in '52. This is a new application of the vacuum booster principle, makes possible easier, much more rapid braking

Changing Customs

(Continued from page twenty-three)

are open cars and have a sporty appearance. Two good examples of this school of thought are the Joseph Thompson, Inc., sport custom and the Clyde Spradley Henry J convertible (both pictured).

What does all this mean? One thing for certain: some, if not all, of the approaches to customizing and restyling are in a state of healthy evolution. In certain respects, some of the groups have become stereotyped, have failed to change their way of thinking since originally setting up what was then a successful design. But other custom car designers with youthful and progressive ideas are initiating changes that will have a dynamic effect on the entire automotive scene. —Walt Woron

GLOSSARY*

Body-drop—to lower the body, either by means of frame-drop, channeling or body-sectioning

Body-section—to lower the body by cutting out a section of the body, then welding together the two halves

Bull-nose—a smoothed-off hood; ornament removed

Channel—to lower the body by cutting out the floor, spreading the body, and dropping it around the frame rails

Chop—to lower the top by removing a section from the window posts and windshield

C-ing—cutting a radius in the frame rails to clear the rear axle; used in conjunction with body lowering

Customize—starting practically from scratch to build up a totally different car

Deck-job—car with smoothed-off turtledeck

Dropped Axle—axle that has been heated, stretched and reshaped so that the center is lower than the outer ends

Fadeaways—front fenders with a fenderline that "fades" into the body side or into the rear fender

Frame-drop—changing the relation of the frame to the axles to accomplish a body-drop

French—applied to headlights, consists of sealing-in chrome ring to fender, then painting to give "one-piece" look

Lead—to fill in holes or crevices with lead

Lowering Blocks—spacers of metal inserted between the axle and spring to lower a car

Mold—to fill in joints with a fillet of lead

Plane—to smooth out a metal panel

Plate—to use sheet stock and lead to achieve a smooth fillet

Reshape—see Plate

Restyle—change the outside appearance of a car, without evolving a drastically modified car (see Customize)

Shave—to remove ornaments and chrome and fill holes with lead to make a smooth hood or turtledeck

*From Trend Book Custom Cars.

January 1952



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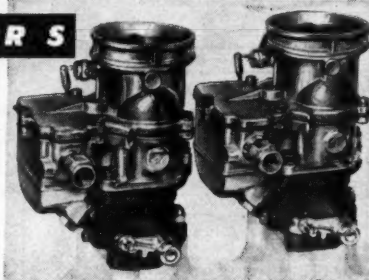
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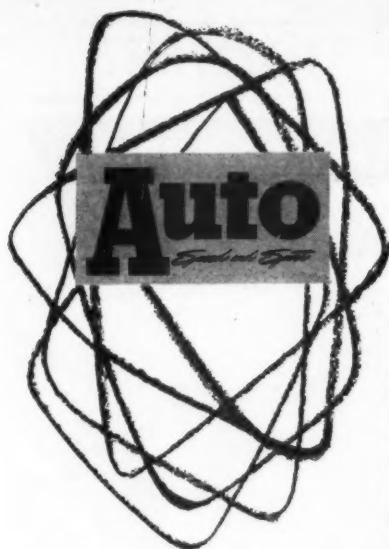
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When You're Right—Fight

(Continued from page nineteen)

A recent gimmick is the "free trial" offered by some dealers. Now this may be a perfectly legitimate offer in some cases, but it can also be operated in such a way that the customer loses rather than gains.

Suppose you have taken a car on a free trial and brought it back for a cash refund or exchange. The first thing you will discover, if you are dealing with an unscrupulous type, is that you can't get your cash back—the offer definitely states that fact in the fine print. Then you will learn that you can't do anything but exchange the unsatisfactory car for one of the same price or more. And, as the bitter climax, you will see that all the cars on the lot have suddenly jumped \$100 or more in price. This is perfectly legal—the dealer doesn't have to sell you a car at any set price as long as he doesn't violate OPS



TWO BRIEF phone calls can save you more money than hectic haggling with the dealer. Your automobile insurance company and finance company that handles the contract on your trade-in may have a refund you can claim

regulations. However, you must buy from him to take advantage of the "free" trial offer. So you either take back the car you didn't like or you pay an exorbitant price for something else you do like. Before you accept a free trial offer, read the fine print. It may well be that your trial is not as free as it seems. Above all don't be careless in your selection of a car simply because you are getting a free trial.

The guarantee is another piece of paper you will probably acquire along with your new, or recent post-war car. It is just a piece of paper and no more unless the dealer is thoroughly honest. There are many ways to avoid making good on a guarantee, most of them being highly effective against the average car-buyer. Never, never, never buy a car on the strength of the guarantee offered.

If you buy from a private party or sell to a private party, there are certain extra precautions to observe. Make your dealings strictly cash-on-the-line. Checks are suspect. The good operator can forge payroll and cashier's checks, so there is no safety in the most respectable forms. And don't rely on receipts or contracts. There

was the famous case of the street-corner operator who took in over \$500 in deposits on a stolen Buick. He gave one receipt to each person, refusing to sell the car except for cash, and made appointments to meet everybody on the same corner when the banks opened after the weekend. Came Monday and he was gone. So was the Buick and all the money.

A legal aftermath to the sale of your car is the question of responsibility for accidents. In some states, you, the original owner, are fully responsible until the change of ownership has been registered in the state capital. So for the first few days, after you've completed the sale and mailed the record in to the state office, you're liable for the conduct of your car in the hands of the new owner. If he has an accident you may successfully be sued for damages. Best policy is to go directly to the local office of the Department of Motor Vehicles and start transfer-of-title proceedings.

IN CASE YOU GO TO COURT

Of course, you must be sure you're right. That means you must *know* you've been overcharged, *know* the engine-repair job was poorly done, *know* the mechanic did not install a clutch when he said he did and charged you for it. This is for your own protection. You lose time and make yourself look silly if you go into court with nothing more to support your story than a few vague suspicions.

When, and if, you do appear in court it is essential that you present as strong a case as you can muster. So begin by going over your own case with yourself. Get it in chronological order, then see which points are your strongest. Now get support on those points. If you are alleging your mechanic charged for a clutch he did not install, get another mechanic to testify the clutch in your car is not a new one. This other mechanic is what is called an "expert witness." Since the defendant in the above example is a mechanic, you would need expert testimony to counter his statements.

Your conduct in court should show what you are—a reasonable, intelligent, normal human being. That will be a tough job. In the first place you probably are not accustomed to appearing in court and you'll be nervous. That's to be expected. In the second place, the defendant, if he is one of the few dealers or mechanics who operate close to the edge of the law, is quite likely an old hand at appearing before the judge. He'll do all he can to rattle you. His object is to get you so nervous or so angry that you can't tell a coherent story. If he is clever enough, he'll trick you into getting angry at the judge. He may shout at you, call you names, insinuate that you're a liar or are trying to swindle him. Make no mistake about it—this is a life and death matter to him and he's out to win by any means.

If you tell nothing but the truth and

tell it as earnestly as you can, being careful not to be immoderate in your language or disrespectful toward the judge, you will make the most of your case.

The size and type of case you have will determine where you file your complaint. In the event that you have an actual criminal complaint, the state or the county or the city will prosecute and you will be the complaining witness. If that happens, events will be largely beyond your control. Cooperate with the attorney.

Most cases rising out of disputes over automobile contracts are heard in the civil courts. If your claim against the defendant is for a small sum of money, you will file in the small-claims court. The procedure is simple because it has been set up for the average man rather than for attorneys. As a matter of fact, it is not customary for attorneys to practice in small-claims court.

You go to the court and tell the clerk there the name of the person you want to sue and why you want to sue. The clerk helps you fill in a few blank spaces on a standard complaint form. This complaint form tells you and the opposing party the day and time when your case will be heard. It also instructs you how and when the defendant should be served with his copy of the complaint. Any adult friend can do it for you. If the defendant refuses to accept service, dropping the complaint on the floor and calling his attention to it is usually sufficient.

It may be that you wish to sue for more than the limit set for the small-claims court in your locality. If so, and you cannot afford to retain an attorney, you can call the Legal-Aid Bureau in your area for assistance. For this address, call the local office of the Bar Association. You will be sent to an attorney for consultation. The fee for the consultation will be very reasonable. It varies from place to place, but \$5.00 per half-hour is an average.

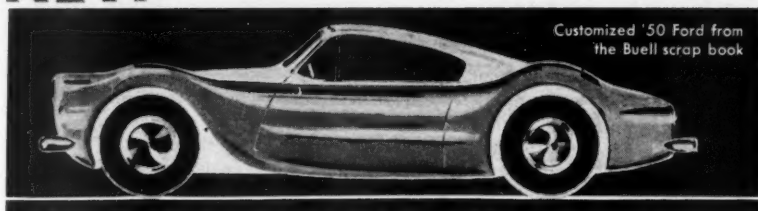
The attorney may recommend that you bring suit. If so, the fees are a matter of contract between you and him. He will generally charge you less than he receives from his regular clients. From here on, you're in his hands, so follow his advice.

One important warning—don't try to fight your case alone in any court above small claims. It just doesn't work very well. Chances are the defendant has counsel to defend him and a good lawyer can smother you with technicalities.

As in the confidence rackets, the dishonest dealer or mechanic depends on your silence. You are a "mark" and marks are supposed to behave meekly when taken. A loud, lusty cry of defiance from you may well pay off in money, but even if it does not, you'll have the satisfaction of knowing you've seriously disturbed the peace of mind of the man who took you for a sucker. You may even put him out of business. So when you're right, fight!

—Eugene Jaderquist

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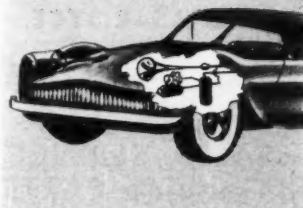


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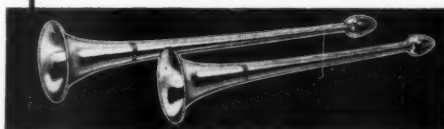
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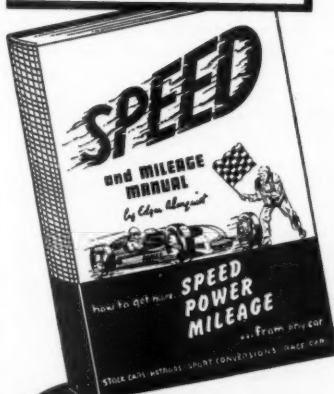


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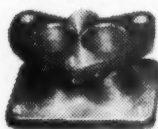
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Vincenzo Lancia's Cars

(Continued from page twenty-nine)

stalled, this engine possessed the immaculate, rectangular-boxed simplicity of appearance that was striven for by many good engineers of the period.

The same can be said for the Dilambda, which was simply a V-8 built on the same principles as the Lambda. The angle of the V was just 24 degrees, holding both engine length and width to a minimum. Bore and stroke of this engine were $3\frac{1}{8} \times 3\frac{13}{16}$ ins. and total displacement was 240 cu. ins. The Dilambda, with its somewhat wider angle of V, used a single camshaft in the block, working the valves via push-rods.

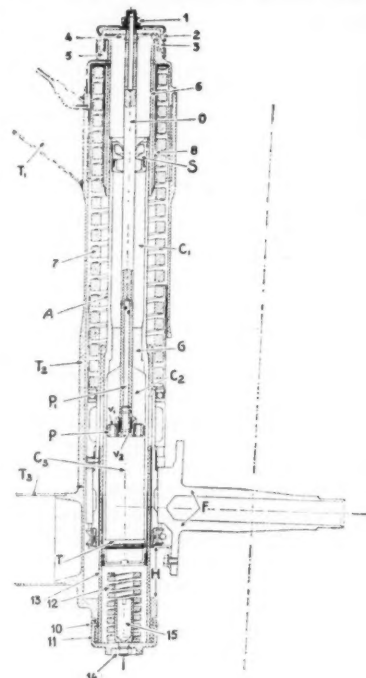
Lancia is a small Italian firm and its name is little known. But like another small firm—Bugatti—it has been turning out a product of rare quality and originality since the first decade of this century. The brilliance of the Lancia name shines even farther into the past, back to 1898 when Vincenzo Lancia went to work for Fiat as a mechanic. His talents pushed him rapidly ahead to the position of race director, and in 1900, he became the company's star driver to boot. He was one of those Herculean pilots who hurled great locomotives across the wagon ruts of Europe, blazing the trail that a motoring world was to follow, establishing the automobile as practical transportation.

Vincenzo Lancia set countless records in his homeland during the dawn of automotive history, finally left the drillground of brutal alpine roadways for international racing. His first race on foreign soil was in the '04 Gordon Bennett Cup and he finished seventh. He came to America in '05 and '07, placed fourth and second respectively behind Darraqs but made the trips really pay off by driving his huge, booming Fiats to new world's records on the sands of old Ormond Beach. The successes he had were due as much to his technical gifts as to his driving skill and by the end of '07, hurling the big iron at unheard-of speeds lost its appeal. Lancia, the engineer, resigned from Fiat and established his own manufacturing company. His cars were immediately notable for the imagination and originality of their design, just as they are today. Lancia died in '37, at the age of 56; Gianni Lancia, his son, leads the firm in his place.

The famous Lancia cars of the vintage period are the Lambda and the Dilambda, both illustrated here. They were blessed with independent front suspension of absolutely original design, which has been a praiseworthy feature of all Lancia cars since '23. Both models expressed Vincenzo's conviction that the engine should always be kept as compact as possible; he appreciated the advantages of the V- (and a tight V at that) type engine as long ago as that.

Lancia adopted independent rear suspension on their Aprilia model in '36 and have used it ever since, always refining, as is their custom. The present-day Aurelia, however, can be considered the Lancia *pièce de résistance* to date.

The modern V-6 Lancia is a fantastic machine. Its engine is a successful thrust into the unknown by a capable pioneer. Running-gear-wise, too, it's a hard car to beat. Even in the '51 Mille Miglia—that



LANCIA PATENT front suspension, as used on Dilambda, is explained in this drawing from the files of Beverly Hills foreign car expert Paul Pedigo. Same layout is employed on new Aurelia

all-out Italian 1000-mile race—the Lancia was bested by only one car, a Ferrari. Other Ferraris with more displacement followed it home.

Lancia's practice has always been to bring out very advanced designs at widely spaced intervals, to refine them steadily over a long period of time. The Aprilia had been in production for 14 years when the new Aurelia was introduced at the '50 Turin show. During the '51 racing season the latest Lancia has chalked up win after win in rallies, sports car, and *gran turismo* (modified stock) races in the hands of novices and of many top drivers such as Ascari Villoresi, Lurani, and Bracco. Still, the Aurelia is primarily a roomy family car with only about 85 mph top speed. The ability of the well-designed engine to run all day at full throttle, fine weight distribution and firm, independent springing of all wheels makes possible unusually high average speeds.

The engine block is a single, light-alloy

casting in which the barrels form a 60-degree V. Bore and stroke are 2.76 x 3.00 ins. and swept volume adds up to 107 cu. ins. (1754 cc). Five-ring pistons are an unusual feature but most interesting engine detail is probably the valve-actuation layout. The hemispherical combustion chambers have their valves inclined fore and aft, instead of athwartships—the customary way. A single camshaft carried in the block between the cyl. banks operates pushrods which drive the bell-crank rockers that drive the valves.

To provide maximum foot room for front seat passengers, the transmission and clutch are integral with the differential housing. The large, deeply-finned rear brakes are mounted on either side of this housing in proper de Dion style and the axle half-shafts have universal joints both inboard and at the wheel hubs.

Engineer Jano is credited with what is new on the Aurelia. He is one of the best-known names in Italian competition and passenger car engineering and it's obvious that his selection to carry on the Lancia tradition of advanced design was a wise one

—Kenneth Kincaid

Cars in the Far East

(Continued from page twenty-five)

power is 28 at 5500 rpm. Compared with the uninspired little L-head engines of earlier Japanese practice, this power unit is very good news to enthusiasts here.

The running gear of the Datsun competition cars is as interesting and as great a step ahead as the snappy little engine just described. Front suspension is somewhat like that of the Ferrari, being of the independent, transverse leaf and A-arm type. Rear suspension uses trailing links and pneumatic struts. Tubular shock absorbers, well-inclined, brace all four wheels. The rear axle is stock Datsun worm drive, carrying the very low gear ratio of 6.5:1. Frame is of rectangular tubing.

In spite of the Dat racers' good performance to date there are two elements of their construction that will have to be altered, if consistent success is to be hoped for. The "wet splash" engine lubrication system must go and the brakes, now scarcely adequate, must be enlarged. But, for a country's maiden sally into an entirely new field, these cars can be considered successful as they stand.

What will happen in the next six years is of great interest to people in the U.S. They have a sizable investment in their former enemy and present ally—an investment that will pay dividends only if the Japanese people can get back into successful competition in world markets. This recent upsurge of interest in automobile competition may be the spark needed to transform today's outmoded factories into tomorrow's modern productive giants.

—Isamu Uchiyama

January 1952

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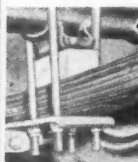
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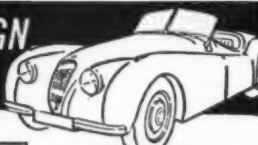
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The Sporting Scene

(Continued from page forty-seven)

seemed to be able to take the corners faster. This, plus some top driving, permitted Hill to stay with Pollack for approximately 30 laps. At that time the Jag blew an oil pressure relief valve, lost its oil, and Hill retired. Although a crew member jumped the fence, removed a valve from a Mark VII Jaguar, installed it in the XK, and refilled the engine with oil, Hill had lost four laps and was unable to do better than place tenth, overall.

Crowd control at the first Reno Road Race (in the words of the Reno Chamber of Commerce, the "First Annual") was exceptionally good. With the cooperation of the Nevada State Police, local police, the CAP, local residents and SCCA members, the spectators were kept out of danger at all times. Fences around the houses in the infield and snow fences where no natural barriers were provided kept the crowd constantly in check. Everybody concerned with the organization and staging of this event is to be commended for his efforts.

NOTE: For more details and more photos, see the January 1952 issue of AUTO.

—Editor

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SELL—'30 Nash roadster, 19-in. wheelbase. New top, paint, heater, oil filter, tires. OHV six engine recently overhauled, runs like new, 14 mpg. \$350. D. C. Talbot, Whitehouse, Ohio.

SELL—Steamboat whistle for MG. Resonant cavity tuned to approximately 48 cycles/sec.: 100 watts audio output. Air operated; compressor and supply tank supplied. \$300. F. H. Fish, 105 Hickory St., Bridgeport, Conn.

SELL—Tape recordings of cars accelerating into the Old Corning Hill at '50 Watkins' Glen Races. Includes Peck's and Milliken's Bugattis and Collier's Ferrari, most others. Hour reel \$25. F. H. Fish Jr., 105 Hickory St., Bridgeport, Conn.

SELL—Metallic maroon '49 Ford conv. with Cadillac grille. Hood, trunk, etc. dechromed. Body seams leaded, leather upholstery. Engine stock except for exhausts. R. Harrop, Lexington, Nebr.

SELL—Fast '49 Merc conv. with Johns pistons, 3/4 cam, sodium valves, Edelbrock heads and manifold, Scintilla mag. 20,000 miles, excellent condition. Whitewalls, extra wheels, snow tires. T. H. McKenna Jr., 18 Moore Rd., Bronxville, N.Y. Bronxville 2-4791.

SELL—'49 Mercury conv. parts, electric windows and seat units complete. Parts for engine and body. G. R. Eakin, 376 Grant St., Franklin, Pa.

WANTED—Rolls-Royce radiator, shell and matching hood. Any model, state price. S. S. Blanc, 640 Corbett Ave., San Francisco 14, Calif.

SELL—'31 Packard Super Eight Model 840 seven-passenger custom phaeton, real monster, rough but original and running. \$450. C. Hauck, 5915 Miami, Cincinnati 27, Ohio.

SELL—'41 Lincoln Continental hardtop; tires good, newly repainted, engine fair. \$650. J. F. Toole, 6530 Verona Rd., Verona, Pa.

SELL—'37 Cord model 812 conv. Perfect body, leather upholstery, good top. Excellent mechanical condition—\$850. M. Latker, 306 Stanford Village, Stanford, Calif.

SELL—Cord parts. Two 812 unsupercharged Beverly sedans to be wrecked; good engines, transmissions, U-joints, hot cams, sheet metal. All or any part. R. Brownell, 6432 Newcastle Ave., Reseda, Calif.

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SELL—'35 Super Eight Packard with Dietrich conv. sedan body. Wheel base 144 ins. Condition excellent. J. R. Kabala, 323 Delaware St., Monessen, Pa.
SELL—'30 Cadillac V-12, five-passenger coupe. Good condition, in daily use, best offer over \$300. L. H. McCune, Los Molinos, Calif.

WANTED—'30 Pierce-Arrow, model A or B, touring car preferred, or parts, especially tonneau windshield and six wire wheels, 18 in. Also owners and service manual. R. J. Schweizer, 530 Hermit Lane, Phila. 28, Pa.

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SELL—'37 Cord, supercharged conv., new car condition, rebuilt at factory, more than \$4000 put into car within past year. \$3250. L. Doty, 120 E. 87th St., New York 28, N. Y.

SELL—Cord 812 sedan. Lacks interior and supercharger impeller, repaint. Remarkably stock and unbutchered. New tires. Has been in daily use, \$375. F. H. Kenfield, 635 4th St. N., St. Petersburg, Fla. PH 75155.

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SELL—'30 Packard double-cowl Super Eight sport phaeton. Mechanically A-1, leather good, original top and paint, but both need renewing. Excellent recaps. Best offer. D. Moss, 83 Spring St., Metuchen, N. J.

SELL—'35 Auburn supercharged speedster in excellent mechanical condition. Would consider '37 Cord conv. or sports car as a trade in. T. J. Ciuba, 1413 6th St., Wichita Falls, Texas.

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SELL OR SWAP—Parts for Reo, '29 to '35, transmission, columns, engine parts. Two complete engines for '29 Motos. S. Walker, 3447 W. Lawrence Ave., Chicago, Ill.

SELL—Exhaust turbo supercharger for late model Chevrolet, Edmunds aluminum manifold for twin carburetion, Rochester carburetors, Mallory distributor and special coil. F. J. Fesch, 3107 Maryland Rd., Rockford, Ill.

WANTED—Complete grille including the two, three-bar side sections for '38 Cadillac model 7519. Must be in good condition. C. R. Larsen, 17½ Waugoo St., Oshkosh, Wisc.

SWAP—'41 Lincoln Continental hardtop in fair condition for '46-'48 Ford or Mercury club coupe or Tudor in good condition. W. S. Hanes, 152 Magalia Ave., Hillsdale, N. J.

SELL—'24 Rolls-Royce Silver Ghost sedan, excellent original condition, capable of long trips or daily use, 20 in. Vague whitewall tires. \$850, photos \$2.25. W. D. Small, 3458 Shenandoah, St. Louis, Mo.

SELL—'35 Packard Eight custom phaeton. Dietrich body. Very good condition. Original black leather interior. Covered side-mounts. Six good tires, engine fair, \$250. P. Lusk, Box 487, Collendale, Syracuse, N. Y.

SELL—'16 Twin-Six Packard clover-leaf custom roadster. Fine condition. Engine #127423. Five good 33x5 whitewalls. Can be driven anywhere. J. Dorman, 2734 S. Ave., Rock Island, Ill.

SELL—Supercharged '36 Auburn roadster conv. Lycoming str. eight engine, with two-speed rear axle. Everything on the car has been rebuilt or is new; extra parts. L. Schellack, Rt. 1, Dewey, Okla., Ph. 5728.

SELL—'36 Auburn eight sedan, model 852, dual ratio. Runs but needs work. Highest bid takes. R. Williams, 8037 E. Garvey Ave., Garvey, Calif.

WANTED—Four or five-passenger phaeton body suitable for Model A Duesenberg chassis. Prefer '26 Cadillac double cowl or Hudson speedster of early twenties. K. C. K'llarin, Box 109, Andover, Mass.

SELL—Auburn speedster, model 851. Car completely rebuilt including new '36 engine. Make offer. Also sell one new Auburn crankshaft and two new camshafts. R. E. Probst, 836 Franklin St., Williamsport, Pa.

SELL OR SWAP—'30 Rolls-Royce PI Brewster town limousine, new tires, battery, brakes, engine a little rough, body good. \$700 or swap even for classic touring, roadster. A. H. Cameron, 220 7th Ave. N., Texas City, Texas.

WANTED—'51 Chrysler V-8 engine complete to and including flywheel. Must be perfect, no junk. Cash. W. Steinbach, 28 Ball Terrace, Maplewood, N. J.

WANTED—Radiator for '38-'39 Mercedes-Benz, model 540K. Quote price with perfect chrome and condition for cash. Telegraph collect or write air-mail at once to W. Steinbach, 28 Ball Terrace, Maplewood, N. J.

SELL—'34 Packard V-12 coupe. Five new Firestone tires, 7.00x17. Good top and seats. Engine like new. Fine running condition. A buy at \$500. D. Bonade, Pineville, Bucks County, Pa.

WANTED—'41 to '47 Lincoln Continental, prefer conv. State price and condition. Have '37 Cord conv. for sale or will trade, good condition. O. Kivela, Box 81, Harrisville, N. H.

SELL OR SWAP—Complete or any part or unit of '29 Franklin sedan, model 135. A. L. Milles, 1018 Tyler St., Wenatchee, Wash.

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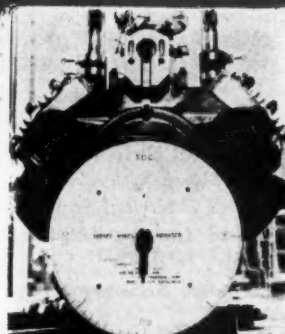
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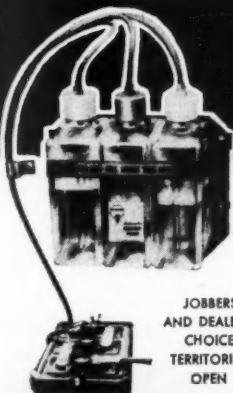
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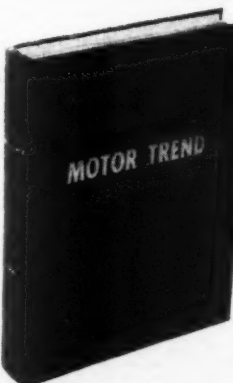
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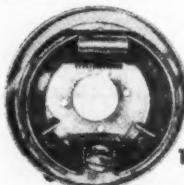
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ine leather upholstery and tubeless Goodrich tires.
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SELL OR SWAP—Graham supercharger in excellent
condition for Amal remote needle carb for 500cc
Ariel motorcycle or other suitable racing equipment
for same. P. Cade, 314 Broad Ave., N.W., Canton
8, Ohio.

SELL OR SWAP—A40 Austin, latest type. Showroom
condition. Sell for ceiling price or trade for different
make of equal value. MG desired. Inquiries in-
vited. D. Scott, 401 8th Ave., Marion, Iowa.

SELL—T.Q. midget racer. Kurtis-Kraft type construc-
tion. Sell with or without engine. Will send snap-
shots upon request. R. Northam, Arlington, Ind.

SELL—37 supercharged Card model 812 conv. coupe.
Show room condition. Whitewall tires. Red leather
upholstery. Radio and heater. Transmission just re-
built, price \$1800. W. T. Collins, 229 Warren
Square, Bethlehem, Pa.

SELL—New custom Cadillac engine, 225 hp. Com-
plete with standard transmission and all acces-
sories. Mechanical valve lifters. Fits '40 thru '48.
\$1100 FOB. G. L. Reno, 4520 SW 62nd Ave., Miami,
Fla., Ph. 67-3066.

WANTED—Antique '05 to '07 model NRS Ford road-
ster. Give price, condition and picture. F. B. Mc-
Phillips Sr., 10568 Gandy Blvd., St. Petersburg, Fla.

SWAP—Chrysler roadster, custom built '50 model.
Black with red leather upholstery. Top speed 125
mph. Fluid drive, 8500 miles. Trade late model
Cadillac or Chrysler. H. E. Angell, 427 Highland
St., East Lansing, Mich., Ph. 8-5825.

SELL—Hopped-up '38 Ford. Mechanically good, body
and radiator shot. Dual-carbed, three-quarter cam,
recent valve job. A. Chapman, 4325 Keever Ave.,
Long Beach, Calif. Ph. 40-3982.

SELL—Packard 12 sedan, last series, 23,000 actual
miles. Chauffeur-driven. Mechanically perfect, paint
excellent, upholstery like new. Tires excellent, two
never on ground, new tubes. D. W. Hurley, Cleve-
land, N. Y.

SELL OR SWAP—47 Standard Eight Tourer, needs
some work. Best cash offer or trade pre-war light
sports or restored classic car. Or rough rear en-
gine Renault if power unit is OK. K. Fisher, 15030
Victory Blvd., Van Nuys, Calif.

WANTED—Duesenberg SJ supercharger parts. In-
terested in moving parts, particularly drive cou-
pling and gears. Price and condition first letter. A.
M. Davack, 348 Aspen, Birmingham, Mich.

WANTED—Foreign car any condition, late model,
1000-1500cc. Cash or trade '50 Triumph Thunder-
bird. Full race engine. Low. E. O. Tierney, 1441
E. 252, Euclid 17, Ohio.

SELL OR SWAP—41 Hollywood Graham. Engine
just rebuilt, new paint; body and glass like new.
Make offer or will trade for late model car. L.
Williams, 5911 Gillan Rd., Lincoln, Nebr.

SELL—39 Packard V-12 sedan. 54,000 miles, fine
running condition, very clean. C. K. Pavear, 36
Kings Beach Rd., Lynn, Mass.

SELL—37 V-8 La Salle four-door sedan. Perfect
chrome, new tires, radio, everything original.
61,000 miles. Photos on request. Very good in-
terior. \$350. L. Richards, Rt. 3, Harwood, Ill.

SELL—36 Auburn 852 supercharged speedster ex-
cellent all-around condition. Will trade for cash
and '10 to '15 fully restored auto. Write for de-
tails. F. Ridgway, 2022 SW Myrtle St., Portland
1, Ore.

SELL—Rolls-Royce roadster, '31 with a custom body
probably by Murphy. Fine condition. Located just
north of Chicago, \$900. L. Suter, Swarthmore Col-
lege, Swarthmore, Pa.

WANTED—Any year model Staver-Chicago car,
preferably in good condition, write giving condi-
tion and price. J. Staver, 306 5th St., So., Virginia,
Minn.

WANTED—'40 Ford V-8 60 in good condition. Stock
engine preferred. Also good Franklin steering gear.
Send info. J. H. Carpenter, c/o US38, Columbia
Falls, Mont.

SELL—'31 Hupmobile Eight-H model, one owner.
Also '23 Willys Knight sedan, one owner. Want
'24 King V-8 roadster or '31 Chrysler Imperial
conv. H. Stubbs, Rt. 1, Box 105, Aptos, Calif.

WANTED—OHV V-8 Cadillac or Chrysler engine.
Stock or modified. Cash, write full particulars. R.
Fudge Jr. 3535 Longridge Ave., Sherman Oaks,
Calif.

SELL—Lea-Francis sports, \$1800. 11,000 miles, never
raced, spares. Trade for club coupe. R. Parr, Box
410d, Rt. 4, Jacksonville, Fla.

SELL—'28 Stutz 88 seven-passenger sedan. Over-
head camshaft, dual ignition. 36,000 miles. Engine
and body excellent. State inspected. \$375. C. M.
Donovan, Box 452, Pottstown, Pa. Ph. 1392.

SELL OR SWAP—Columbia two-speed Ford rear
end; 105 offie engine like new; Van Norman boring
bar 65 hp Chris Craft marine engine. T. Kessler,
317 N. Ogden St., Buffalo, N. Y.

SELL—'05 or '06 Maxwell engine in running order.
Make offer. E. F. Rose, Maples Rd., Harrison, Me.

WANTED—Front bumper, heater for late Austin
A90. Must be in good condition, reasonable. Dr.
A. H. Jewell, University Hospital, Ann Arbor, Mich.

SELL—'36 Reo Flying Cloud, two-door. Ideal for
customizing. Radio, heater, good tires, new French
gray paint, 50,000 actual miles. Needs rings. \$250.
J. P. Berg, Rt. 1, Box 201-AA, West Chicago, Ill.

WANTED—Reward for information leading to pur-
chase of '38 Pierce-Arrow or Silver Arrow. C. A.
Mowrey, 115 Damore, Elmira, N. Y.

WANTED—Ford, give info on first letter.
C. A. Mowrey, 115 Damore, Elmira, N. Y.

SELL—L29 Cord Phaeton. Excellent body, top, up-
holstery, paint, tires, engine, etc. Write for further de-
tails and free photographs. R. W. Booher, 112 14th
Ave., Columbus, Ohio.

WANTED—'41 Lincoln Continental closed model. De-
sire overdrive, low mileage, excellent condition in-
side and out, never wrecked. A. G. Barker, 4121
De Siard Rd., Monroe, La.

WANTED—L29 Cord speedster or roadster in ex-
cellent condition. Must be authentic. Send de-
scription and pictures. A. G. Barker, 4121 De Siard
Rd., Monroe, La.

WANTED—Cord emblem which fits transmission
cover and four original (ventilated) '36-'37 Cord
hubs in excellent condition. A. G. Barker, 4121
De Siard Rd., Monroe, La.

SELL—Classic '28 Isotta Fraschini Landaulet, origi-
nal; good running condition. Pigskin upholstery,
aluminum body, six wheels, dual carbs, overhead
valves. Cost \$22,500, take \$750. C. R. Stuart, 222
N. Jackson, Apt. 9, Glendale, Calif.

SELL—'36 Cord four-door sedan, model 810. Excellent
condition throughout. Engine, clutch, transmission,
U-joints, body and tires perfect. Pictures on re-
quest. \$1200. J. Whitaker, R. D. 5, Pen Yan, N. Y.

SELL—48 Lincoln Continental hardtop coupe in ex-
cellent condition. Dark blue finish, red-leather
trimmed upholstery, white wall tires. Dr. J. G.
Chapman, 1154 Lonsdale Ave., Central Falls, R. I.

SELL—'39 Ford 60 engine complete with transmis-
sion and radiator. Engine is complete and is in
good running condition. Transmission OK. G. Fiala,
2508 S. 57th Ct., Cicero, Ill.

WANTED—Need tonneau windshield for '34 Super
Eight Packard phaeton. Have all body fittings. Also
want service manual. Information appreciated. L. A.
Benton, 327 Grant Ave., Bound Brook, N. J.

SELL—'36 Packard Super Eight sport phaeton,
rummy, mint condition, new gray and red paint,
radio, heater, power brakes, rebored, reground, six-
plies. Photo. \$700. T. Mills, 515 East Penn, Hoop-
ston, Ill.

SELL—McCullough supercharger, latest model, never
used or installed. Fits Ford-Mercury to '48. Complete
\$150. F. van Buren, Hamburg 40, Mexico City,
Mexico.

WANTED—'10 to '20 Packard touring or roadster
restored or unrestored. State price and condition.
Will pay for photo if available. C. E. Black, 1450
Philadelphia SE, Grand Rapids, Mich.

SELL OR SWAP—'46 Hudson conv. New red paint,
custom front, automatic shift, overdrive, whitewalls,
directionals, all deluxe accessories. Sharp, im-
maculate, \$725. S. Stine, 3749 Pine Grove, Chicago
13, Ill. WE 56757.

WANTED—Sports car, conv., seat at least two.
Any make or year, price important to beginner;
want to join congenial group and learn modifying
and maintenance. S. Stine, 3749 Pine Grove, Chi-
cago 13, Ill.

SELL OR SWAP—Midget racer converted to sports
car, 49 Studebaker Champion engine. Aluminum
head, magnet ignition, cam. Quick-change rear
and battery, starter, generator, lights, clutch, and
transmission. H. J. Stavanja, 18218 Nottingham,
Rd., Cleveland 19, Ohio.

SELL—'35 Chrysler Airflow, rare six-passenger
two-door coupe. Good body, fenders, grill. No rust.
Needs mechanical work; in running condition. R.
Berry, 3029 Sagamon Ave., Dayton 9, Ohio.

SELL—'28 Cadillac V-8 conv. coupe, good running
gear and body. Needs fender work and top, could
be restored easily, make an offer. S. Monson, 4631
W. 7th St., Duluth 7, Minn.

WANTED—'33 Buick model 33-58 victoria with
fender wells. Must be complete, in good condition
and within 300 miles of Cincinnati. W. Bowen,
R.R. Box 300, Cincinnati 30, Ohio.

WANTED—'36 Auburn speedster, body and chassis
must be in A-1 shape. Preferably in East. Send
photos and price. R. W. Smith, c/o Smitty's Drive-
In, Gen. Del., Quakertown, Pa.

SELL—'32 Cadillac V-12 sedan. Six wire wheels
and tires. Good condition except for one burned
valve. Less than 40,000 miles. Sell complete or
for parts. K. R. Burch, Branchport, N. Y.

SELL—'41 Cadillac conv. sedan, two owners. Radio,
heater, white walls, standard shift. 72,600 miles.
All original and immaculate except for worn
leather seats. Highest bid over \$1000 takes. J.
Parks, 125 31st St., Manhattan Beach, Calif.

SELL—'35 four-door Packard 12 sedan; good en-
gine, tires excellent, body fair. Best offer or what
auto car have you? J. Winter, Perry, Ohio.

SELL—Eight sets Novi pistons, pins, rings, com-
plete kits; Ford size 3 1/2 x .020. \$8 per set, one or
all. Ship anywhere COD and postage. V. Smul-
dino, 1559 W. 60th St., Los Angeles, Calif.

SELL OR SWAP—Barris custom Chevrolet conv.,
cover Dec. Mt. riviera top. Over \$4000 invested,
gray and white interior, metallic-purple exte-
rior. Winner in various auto shows. Best offer. B. T. In-
lar, 2638 Walnut St., Huntington Park, Calif.
LA 7339.

SWAP—Auburn 851 supercharged speedster. Re-
built to mint condition by Auburn at cost of \$1800.
Want California-owned Duesenberg conv. SJ in
like condition. Will pay difference. H. M. Resch,
325 Vine St., San Jose 10, Calif.

WANTED—Water injector, 12-volt racing coil, mag-
neto, crash helmet, any MG accessories. C. S.
Cushing, 58 Van Ness Rd., Belmont, Mass.

SELL—'32 Ford coupe, five windows. Green 16 in.
wheels. Hydraulic brakes; metal top; '39 engine
and transmission. Clean and in good condition,
\$250. M. G. Mott, Rt. 5, Box 289, Bakersfield,
Calif.

SELL—New Winfield cam, super 1-A grind, on
perfect used 21A core, '42-'49. Never run. Set
used Johnson adjustable tappets. Unit \$37.50 COD
plus postage. R. Burke, 410 W. 71st St., Los An-
geles, Calif.

SELL—Edmunds dual manifold for '41-'50 six cyl. Oldsmobile. Uses Ford carbs, water heated. \$25 prepaid, fittings included. L. S. Baker, Rt. 1, Naches, Wash.

WANTED—Cadillac OHV V-8 engine. Must be in good condition and complete, send year, condition and price. B. Snyder, 125 7th, Fairbury, Neb.

WANTED—'41 Lincoln Continental; prefer conv. but consider others. Want good body, engine no requirement. Send photo and price. E. G. Flaig, 8th and Pine Arkade, Philadelphia, Ark.

SELL—'41 Hollywood Graham four-door sedan. Car in Kelso, Wash., owner in Newport. \$60 cash or what have you. Would like old Austin. E. War-moth, Box 276, Newport, Ore.

WANTED—Used Skylark or Graham Hollywood supercharger. Also literature on same. All letters answered. F. Blunt, 1419 E. Pershing, Cheyenne, Wyo.

WANTED—'40-'41 Lincoln Continental preferably conv.; must have good frame and body. Mechanical condition not important. Price must be right, prefer Mid-West location. N. G. Jannes, 1728 29th St., Rock Island, Ill.

SELL—Card catalogs, almost complete set, duplicates. F. Miner, 3787 E. California St., Pasadena 10, Calif.

WANTED—Used high-compression aluminum head (8:1) and dual manifold with dual carbs for '50 Studebaker Champion. M/Sgt. J. Azalai, 3525 Acft. Grn. Sq., Nellis AFB, Las Vegas, Nev.

SELL—One aluminum Edmunds dual manifold with Stromberg 97 carbs for six cyl. Dodge or Plymouth. Includes velocity stacks and linkage between carbs. Price \$30. J. Gregory, Box 452, Tarleton Station, Stephenville, Texas.

WANTED—'32-'34 Auburn conv., 12 cyl. State price, condition. H. Denhard, R.D. 2, Greenville, N. Y.

WANTED—'35-'36 Auburn conv., supercharged. State price and condition. H. Denhard, R.D. 2, Greenville, N. Y.

WANTED—Duesenberg, model J, conv. State price and condition. H. Denhard, R.D. 2, Greenville, N. Y.

SELL—'36 Auburn 852 supercharged conv. sedan. Engine, supercharger factory rebuilt, body, top and upholstery good. Best offer over \$600. L. E. Nelson, 513 W. Newton, Rice Lake, Wis.

SELL—'35 Auburn speedster; extra clean, new car condition throughout. 47,000 actual miles. Will accept trade in or \$2000 outright. D. McLaughlin, 4016 Globe Ave., Culver City, Calif.

WANTED—Stanley or White steamer in restorable condition or better. Must be within several hundred miles of Wash., D. C. Send description and price. Lt. W. R. Malone, BOQ Mailroom, Bolling AFB, Washington, D. C.

SWAP—'50 custom Packard conv.; perfect condition, ultramatic drive, radio and heater, rear seat windshield, 20,000 miles, turquoise blue. For '47 or '48 Continental coupe. K. E. Schinbeckler, c/o Schinbeckler Shell Service, Columbia City, Ind.

SELL—'47 Lincoln Continental coupe. Excellent condition throughout. Engine overhauled, has P.C. chrome piston rings. Dual carbs, dual quiet exhaust system. Sheridan blue, custom accessories. J. F. Manting, 505 Winter, Big Rapids, Mich.

SELL—'67 cu. in. two-car Salomon engine, \$200. Supercharger for Crosley or 500 Fiat, not war surplus, \$50. Pair Riley carbs for Offy midget, \$40. R. W. Gent, 445 Green Rd., South Euclid 21, Ohio.

WANTED—Part of my automotive book collection. Send self-addressed stamped envelope for free list. T. C. Murray, 301 Ridgeway, Rochester 13, N. Y.

WANTED—'81 aluminum head for '48 Studebaker Champion, also dual manifold with carbs and other parts for the car. C. S. Downs, 1829 Valley Dr. S.W., Atlanta, Ga.

SWAP—'50 Mercury conv. standard transmission, 20,000 miles, in excellent condition. Want MG, Simca, Lincoln Continental, or other sports car. L. L. Abbot, 117 Stanton Ave., Ames, Iowa.

SELL—'50 Crosley super sports conv. roadster. Radio, heater, Bendix brakes; never raced. Beautiful throughout, only 11,000 miles. Must sell quick, \$300 takes. S. Terry, 3100 W. Sherman, Chicago, Ill.

WANTED—Radiator grille for '32 Ford V-8. State price and condition. B. Hepp, 2275 Monaco Pky., Denver 7, Colo.

SELL—Old-time auto magazines, motor annuals, auto trade journals, etc., from original owner. Send large stamped addressed envelope for list. G. W. Haywood, 81 Wellington Ave., Short Hills, N. J.

SELL OR SWAP—'49 Singer roadster, see April '51 HT, \$700. Solid '33 Pierce-Arrow Eight club sedan, 39,000 actual miles, \$250. Want Cord, Continental or custom speedster. H. B. Borges, 3708 E. Independence, Tulsa 12, Okla.

WANTED—Classic or sports car. Please send photographs, price, and running condition. R. Withams, 109 N. Wabash, Chicago 2, Ill.

WANTED—'26 Packard Six engine or wreck wanted for parts. Also 6.0x23 tires. Antognini, W. Norwalk Rd., Darien, Conn.

SELL—Chevrolet chassis shortened and lowered, rebuilt six engine, 3/4 race cam, planed head, twin carbs. \$300 takes it. Antognini, W. Norwalk Rd., Darien, Conn.

SWAP—'40 Ford coupe with Cadillac engine; hydraulic transmission, radio, heater, spotlight, vacuum booster on brakes, 50 gal. gas tank, Auto-Pulse fuel pumps. Want late Ford. J. Grady, 907 N. Gower St., Los Angeles 38, Calif.

WANTED—Ford 815-B heads, single or pairs, cracked or otherwise. State price and condition. B. Dom-broski, 749 King Ave., Indianapolis, Ind.

WANTED—Pierce-Arrow, good condition; low price. Prefer '36-'37, will consider earlier model. Reasonably near Rochester. B. J. Weis, 142 Vassar St., Rochester 7, N. Y.

SELL—'30 Stutz M-23 sedan; OH cam, dual-ignition, four speed transmission, knock-off wheels. Mechanically very good, body sound, needs paint. B. Durbin, Box 233, Dunellen, N. J.

SELL—'33 Model J. Duesenberg town car, new white top, good tires, A-1 condition throughout, runs perfectly. \$1600 FOB Tulsa. T. Minshall, 2010 E. 37th St., Tulsa, Okla.

WANTED—Someone interested in '29 Roosevelt four-door sedan in excellent condition throughout. Hayes body and Marmon eight engine. A/C C. A. Cooke, 3300 Trng. Sqdn. (Contr. Fly.) 52-G, Greenville AFB, Greenville, Miss.

SELL OR SWAP—'33 Auburn conv. coupe, '35 conv. sedan; both have dual-ratio axles and some parts for '31 to '35. Want Lincoln Continental hard top, engine unimportant. O. Hilton, 307 S. Springfield Ave., Rockford, Ill.

SELL—At 1/2 cost 3/4 cam, high compression head, dual manifold, tachometer, high lift Barker rockers; all fit '49 Chevrolet. P. Lenertz, 3035 N.W. 22nd Court, Miami, Fla.

SELL—'25 Packard six cyl. four-door sedan, model 326. Very good condition throughout. 45,000 miles. Original manual, tools, and winter storage jacks. \$300. D. J. Trefney, Sam Center Rd., Chagrin Falls, Ohio.

SELL—'29 GMC fully machined. Includes crank assembly, Iskenderian FRC, Nicson dual manifold, Venolia pistons, Grant rings, FM bearings. All new. Make offer, FOB Peoria, Ill. H. R. Boves, Redwood Falls, Minn.

WANTED—New or used hydraulic motor and pump for electric window for '50 Mercury conv. Write or call M. R. Mitchell, Victoria Hotel, Jacksonville, N. C. Ph. 251.

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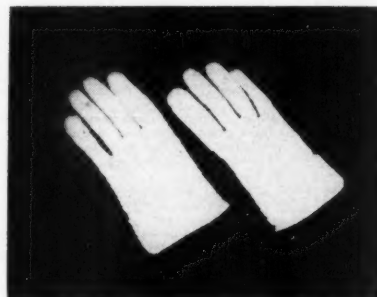
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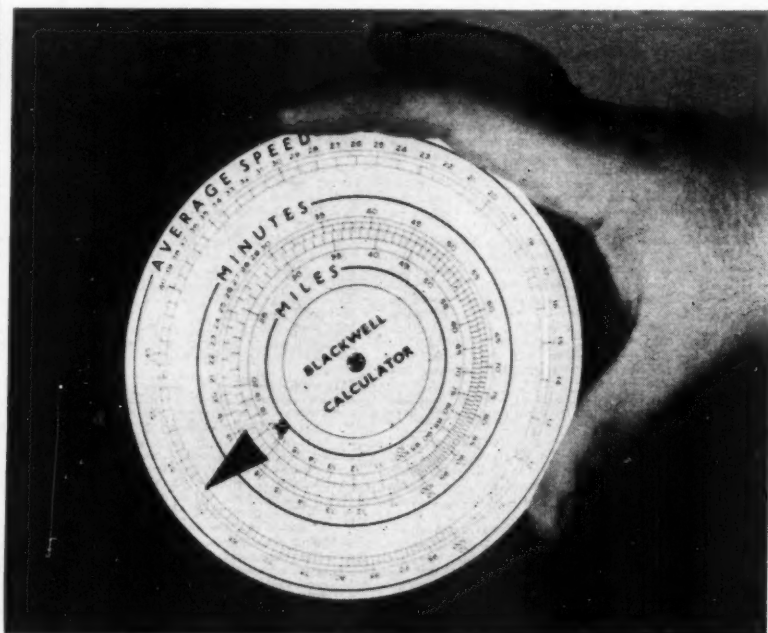
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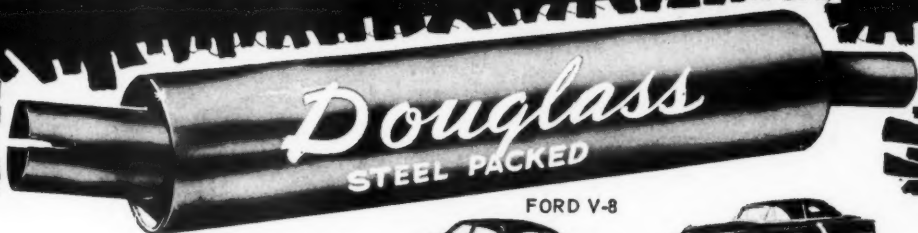
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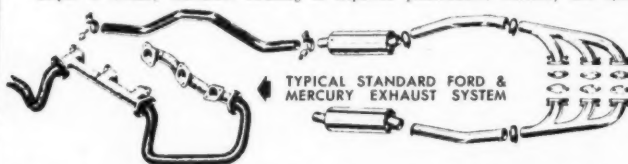
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